

Improving News Media Communication of Sustainability and the Environment: An Exploration of Approaches

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Abstract

The majority of earlier studies on media and the environment have concentrated on media contents, effects, and associated problems and limitations. The focus here on ‘approaches to improvement’ advances research in this field a step forward. This research proposes three broad ‘approaches to improvement’ and undertakes four case studies to provide an exploration of their potentials.

First is the ‘educational approach’ of building journalists’ knowledge. Two cases studies illustrate the high potentials of this approach. Assessment of a mid-career training initiative in environmental reporting reveals positive impacts on journalists’ knowledge, reporting skills, and job satisfaction. Evaluation of a university journalism module on sustainability shows increases in students’ understanding of the meaning and multidimensional nature of sustainability, and their appreciation of the need for enhancing public awareness through media coverage.

Second is the ‘social responsibility approach’ of media receptiveness towards a more responsible role in communicating these issues. An analysis of newsmen’s views reveals partial support for this approach – although they were somewhat unreceptive to media environmental policies as a way of expressing social responsibility, they tended to be receptive towards an educative role. However, journalistic routines and norms may restrict an educative approach to news reporting.

Third is the ‘message framing approach’ of employing effective and persuasive communication strategies in the framing of mediated information to influence understanding and perception. An experimental assessment of an information campaign on ‘sustainable consumption’, designed based on this approach finds some increases in community understanding and concern; thus, illustrating the potentials of this approach.

Finally, drawing from the findings of the case studies and other observations in the literature the study identifies the interdependencies between the three approaches and the interconnected network of other influencing factors that are likely to determine their success – thus providing a clearer perspective of their viability in the real world.

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Chapter 1

News Media Communication of Sustainability and the Environment: An Urgent Need

“Without frequent and appropriate communication of overarching ideas, mission, and vision, Judaism or Christianity would not exist today”
(Woolfe 2002: 88)

1.1 Problem statement and research objectives

In view of Woolfe’s (2002) point on the importance of communication for sustaining religious beliefs, the same may be said about environmental beliefs and concerns about sustainability – that these may not exist without frequent and appropriate communication. Considering the present state of a declining global environment and increasing levels of global unsustainability it may be emphasised that communication about sustainability is essential for encouraging people to be responsible for their environment (Smyth 1990) and the sustainability of their society. Such responsibility is vital considering that people rely on the sustainability of the life-supporting systems of the natural environment. It is also important to communicate the scientific reasons for environmental action (May and Pitts 2000). Unless people are “persuaded of the need for action, potentially unpopular measures such as curbing private car use and energy waste” would be very difficult to implement (*ibid*: 21). However, despite a widespread recognition of the importance of its communication, many have observed that the concept of sustainability has remained one that is yet to be clearly understood by the majority of community members (Barry 2003; Jucker 2002; Leal Filho 2000; Oopen and Hamacher 2000). This shows that there is indeed a fundamental problem to be addressed within the wider framework of initiatives towards sustainability – i.e. a lack of appropriate communication.

While peoples’ perception and views about sustainability and environmental (S&E) issues are likely to result from a complex web of a range of information sources and a variety of communication and social processes, one source of information that contributes to this web is the news media. It is perhaps for this reason, that many have identified media communication of sustainability and the environment to be necessary for gaining public support towards conservation of natural resources and environmental protection. Previous observations in the field of media environmental communication have indicated signs of public dependence on the media for S&E information and have revealed some degree of media effects on public awareness, knowledge and opinion. These observations have been essential in pointing to the media as a potentially effective domain for public information. However, as the news media picked up on the environment as a topic for news reporting at some point in the 1960s, so did media critics and scholars pick up on

environmental news coverage as a topic for rigorous inspection, identifying its many inadequacies and raising questions about the impact of such coverage on society – suggesting that there is a need for improvement.

The bulk of media research concerning S&E issues may be broadly divided within two categories: effect studies and content studies (Shanahan and McComas 1997). Content studies are often carried out to determine quantity and patterns in media coverage. These studies have identified a wide range of inadequacies in media communication of S&E issues and problems associated with the manner in which these issues were covered. Effect studies have been useful in gaining an understanding of how portrayal of S&E issues in the media affects the environmental knowledge, beliefs, attitudes and behaviours of media users. By comparison hardly any enquiries have examined how media communication of these issues could be improved which might usefully inform interested parties in efforts towards achieving such improvements. This identified gap in research served as a foundation from which necessary areas of enquiry were drawn to develop the agenda of this research which was centred on how S&E messages might be better communicated through the news media.

Three overlapping approaches that might be employed to improve news media communication of S&E issues were proposed: (1) the ‘educational approach’ of providing relevant training and education for journalists and journalism students; (2) the ‘social responsibility approach’ of mainstream media receptiveness towards a more responsible role in communicating these issues; and, (3) the ‘message framing approach’ of employing strategically framed mediated messages about sustainability to influence understanding and perception. This research took on the objective to explore the effectiveness and viability of these approaches. To achieve this objective, four distinct case studies were undertaken and a range of impact assessment and appraisal methods were employed to examine the approaches. Then, drawing from the findings of the case studies and other observations in the literature the interconnected network of other influencing factors that were likely to determine the success of these approaches were identified – thus providing a clearer perspective of their viability in the real world.

While acknowledging the complexity of the identified problem and the need for a synergistic combination of a variety of communication methods, channels, and domains and other supporting interventions, this research focuses on one arena of communication for addressing the problem – the media, and more specifically within this arena – the news media. A major appeal of the media as channels for communicating these issues is, as Parker (2003b) suggests, their capacity to inform and educate a large number of people within a short period. The focus on news media becomes important when we consider past research that indicates a tendency among members of the public to believe the news (Austin and Dong 1995; Durfee 2006; Kim *et al.* 2000; Robinson and Kohut

1988; Romer *et al.* 2003). Therefore, this research concerned itself with the urgent need for improvements to news media communication of S&E issues as a means for achieving the long-term outcome of enhanced public understanding and support towards S&E initiatives, which in turn may help ensure a good quality of life for present and future generations.

In the following sections, this chapter states the aspiration of this research, then outlines its overarching framework, and briefly introduces the theoretical background that formed some of its core assumptions. Next, it provides a list of terminologies that clarifies meanings and further defines the scope of the research. This is followed by a section discussing the caveats and limitations of this study, and ends with a brief outline describing the subsequent chapters of the thesis.

1.2 Research aspiration

This research falls within the category of “real world research” which, as Robson (2002: 47) describes, “is sparked off by wanting to solve a problem, or a concern for change and improvement in something to do with practice.” Robson further noted: “Real world researchers also often have an ‘action’ agenda. Their hope and intention is that the research and its findings will be used in some way to make a difference to the lives and situations of those involved in the study, and/or others” (*ibid*: 201). The hope and intention of this research is to inform environmental and social interest groups, governments, media educators, journalists, publishers, and broadcasters, interested in mediated communication as a method for encouraging social change for sustainability. Hence, this research aspires to provide insights into approaches that might be employed to improve news media communication of sustainability and the environment. By focusing on three broad ‘approaches to improvement’ and identifying important factors that would need to be considered for their successful implementation, this research contributes to literature on a key sub-component of the wider field of environmental communication and practical knowledge that is likely to be instrumental in the real world.

1.3 Theoretical background and research framework

This section provides the theoretical background of this research, outlines the four case studies that formed the key analytical chapters of this thesis, their logical sequence, the specific ‘approach to improvement’ they address, and how each approach points to the final aim of achieving improvements to news media coverage of sustainability and the environment. However, in understanding the framework of this research it is essential to see it as a sub-component of a wider multidisciplinary framework that draws from a range of different genres of enquiry, of which only a fraction is captured in its graphic description in Figure 1.1.

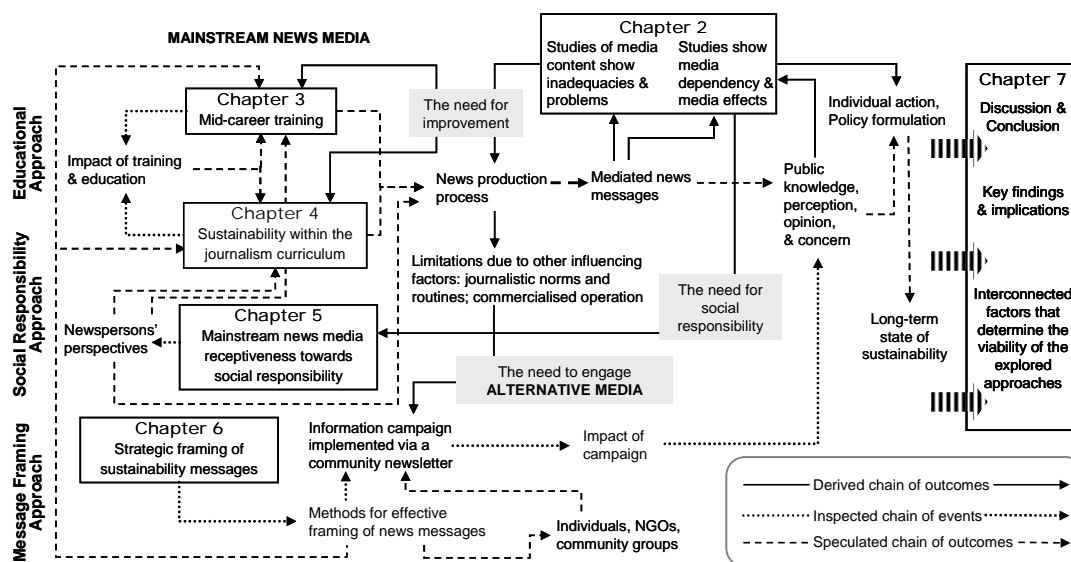


Figure 1-1 Research Framework

The core problem this thesis addresses is the lack of effective communication about S&E issues in the news media. As the speculated chains of outcomes in Figure 1.1 show, and as the following literature review chapter will elaborate, this is an important problem that needs addressing for two fundamental reasons: one, because of the present state of global unsustainability; and two, because improved news media communication may enhance public understanding of S&E issues – this understanding in turn may have an impact on public action as well the policy formulation process. In an overarching manner, the assumptions of this thesis were based upon the *media dependency theory* and the *media effects theory*. This theoretical grounding is further detailed in Chapter 2, where a discussion of public dependence on the media for S&E information and various accounts of media effects are provided. Some accounts of media effects served as a basis for the assumption in this thesis that the media are potentially effective channels for the communication of S&E matters. Resting on the *media dependency theory*, the media were presumed to have an important role to play in communicating information about S&E issues to the public. Further drawing from a wide range of sources within the field of media studies as well as from non-empirical perspectives provided in the literature that have pointed to inadequacies and problems associated with the manner in which these issues are covered (detailed in Chapter 2), as shown in the derived links in Figure 1.1, this research lays out its core assumption, i.e. the need for improvement to news media coverage of S&E issues – which necessitated the enquiries within this research. The first three of the four case studies (Chapters 3, 4 and 5) within the research framework concern approaches for improving mainstream news media coverage of sustainability and the environment.

A fundamental pre-requisite for any kind of improvement to occur is often relevant knowledge. In the first two case studies, detailed in Chapters 3 and 4, what might be termed an ‘educational

approach’ to achieving the intended improvement is explored. The objective of the ‘educational approach’, the first ‘approach to improvement’ examined in this thesis, matches the gist of the *knowledge building theory* earlier proposed by Scardamalia and Bereiter (2003; 2006). Knowledge building, as described by Scardamalia and Bereiter (2006: 97-98),

represents an attempt to refashion education in a fundamental way, so that it becomes a coherent effort to initiate students into a knowledge creating culture. Accordingly, it involves students not only developing knowledge-building competencies but also coming to see themselves and their work as part of the civil[s]ation-wide effort to advance knowledge frontiers.

Scardamalia and Bereiter (2003) differentiated the concept of knowledge building from learning. “Learning is an internal, unobservable process that results in changes of belief, attitude, or skill. Knowledge building, by contrast, results in the creation or modification of public knowledge – knowledge that lives ‘in the world’ and is available to be worked on and used by other people” (*ibid*: 1371). In this thesis, the association of the *knowledge building theory* to the training and education of journalists in environmental reporting would suggest that through such training and education, journalists may be initiated into a culture of knowledge creation, and they might consequently perceive themselves to be at the frontier of S&E knowledge. This would be particularly important if they are to play an ‘educative’ role. It is perhaps this realisation that has led to a recent increase in mid-career training in environmental reporting, and the appearance of related topics within the journalism curriculum. However, the impacts of this ‘educational approach’ have scarcely been addressed in academic literature. This research fills this gap by providing an examination of the impacts of such training and education.

The first case study in Chapter 3 explores the potentials of the ‘educational approach’ by assessing the impact of a series of mid-career training programmes in environmental news reporting. In addition to a documentation of training outcomes, as the speculated chains of outcomes in Figure 1.1 show, impact assessment may also provide information that can aid the development of future training initiatives in this field; hence, strengthening future outcomes of the ‘educational approach’. However, mid-career training programmes are likely to be organised on an *ad-hoc* basis and subject to the availability of training sponsorship. On the other hand, the inclusion of S&E issues within the curriculum of a University level journalism programme, the second case study detailed in Chapter 4, is likely to be a more permanent feature within an ‘educational approach’. As the expected chains of outcomes in Figure 1.1 illustrate, such training and education can be expected to have an impact on the news production process and subsequent improvements to mediated messages which in turn may have an impact on public knowledge, perceptions, and concern.

As shown in the derived links in Figure 1.1, the social and democratic importance of S&E issues and the observed effects of media coverage of these issues on public knowledge and opinion as well as on the policy formulation process have led to assertions that the media would need to take

on a more responsible role in communicating these issues, thereby suggesting a ‘social responsibility approach’ (the second approach addressed in this thesis) to achieving improvements to media coverage. This study proposed that such a social responsibility may be expressed by the media in two ways. The first, through a *principle of media responsibility in environmental education*, which suggests that since the media can have an educative effect, they need to cover S&E issues in a responsible manner. Such a principle could also suggest that the media take upon themselves a responsibility to intentionally educate. A second way for the media to express social responsibility would be through the adoption of a *media environmental policy*. This is considering the suggestions that many have put forward that the media’s environmental social responsibility needs to be clearly expressed in official policies of the media (detailed in Chapter 2). The media’s increased commitment to coverage of S&E issues, expressed in the form of editorial policies, codes of conduct, or corporate social responsibility aims could improve their coverage of these issues. As the possibility of these two social responsibility approaches has hardly been proposed as such, nor have they been tested, this thesis provides a preliminary account of their examination in its third case study, described in Chapter 5. This case study gains the responses of journalists and media decision-makers towards the proposed educational role of the media, and the suggestions for media policies and corporate social responsibility aims concerning the coverage of S&E issues. As the speculated chain of outcomes in Figure 1.1 shows, such receptiveness can have a positive influence on the news production process. Such receptiveness may also lead to more positive news media attitudes towards mid-career training programmes in environmental reporting and have an implicit influence on developments of the tertiary journalism curricula – hence providing an indirect support for the ‘educational approach.’

Drawing from the literature and findings from the preceding case studies, it was established that for a variety of reasons, the mainstream media are limited in their capacity to provide in-depth coverage of these issues, and are constrained by the norms of their profession that prevent the employment of motivative, persuasive, or even educative communication. It was posited that the engagement of alternative media channels (that are not restricted in this way) would be necessary for overall improvements to mediated communication of S&E issues. It was proposed that improvements to mediated communication of S&E issues could be achieved through strategically framed messages based on effective and persuasive communication theories. Hence, the third ‘approach to improvement’ examined in this thesis may be described as a ‘message framing approach.’ Although this approach has been previously examined in the context of health communication to influence public understanding and behaviour, and in political campaigns, it has hardly been examined within the context of S&E communication. Despite accounts of public lack of understanding of sustainability, there has been little exploration on how related messages could be framed effectively to enhance understanding. In addition, the engagement of alternative media channels in S&E communication is an area that is poorly addressed in communication literature.

These gaps in related literature provided the basis that necessitated the final case study (detailed in Chapter 6) undertaken within the framework of this research – i.e. the ‘message framing approach’ to achieving improvements to mediated messages on S&E issues. This case study describes the development and testing of strategically framed messages about sustainability implemented in a community news medium. Development of the ‘message framing approach’ has the potential to inform not only the news production process within community news media, but, as the speculated chain of outcomes in Figure 1.1 shows, such an approach could also inform the proposed ‘educational approach’ whereby journalists and journalism students could be taught to frame news messages more effectively.

Through a broader analysis of the findings derived from the four case studies it was possible to see the various other interrelated factors that can have an effect on the viability of the above three approaches. Moreover, in the real world improvements to news media communication of S&E issues would depend on much more than the four linear chains of outcomes inspected in this study. Hence, to provide a holistic conclusion, in Chapter 7, the preliminary research framework that consisted of the four chains of outcomes is placed within a wider framework of a network of chains of inputs and outcomes that would need to be considered when implementing the three approaches to improvement proposed in this study. Hence, the conclusion provides a clearer view of the broader picture of all the other changes that would need to occur before substantial improvements to news media coverage of S&E issues can be expected. A key advantage of viewing the problem that this thesis addresses (i.e. a lack of effective mediated communication of S&E issues) within a multifaceted framework of a network of causes and outcomes is that it informs of the complexities of addressing the problem in the real world as it lays out the various interconnected and interdependent factors that are likely to determine the success of these approaches.

1.4 Terminologies

Several recurring terms in this thesis, in particular those that are potentially contentious and those with variable definitions, require clarification from the onset considering the potential for misinterpretation. This clarification of terminologies was also important considering the transdisciplinary nature of this research which draws from a wide range of fields including the environmental sciences, the social sciences, media studies, journalism, communication theories, environmental communication, and the emerging field of sustainability communication. Hence, in clarifying the adopted terminologies, this section also clarifies how they define the scope of this research, and in a few cases, the limitations associated with their adoption.

In this thesis the phrase ‘*sustainability and the environment*’ is used to describe two distinguishable yet intricately connected topics. This was essential for several reasons. One, while the term environment, as used in the environmental sciences, typically refers to the natural environment and

the various ecosystems contained within it, the term sustainability takes on a much broader meaning including social and economic concerns, alongside environmental ones. Two, unlike the term ‘sustainability issue’, the term ‘environmental issue’ is historically well established and there are fewer qualms about what it means. Three, because the historical roots of the term ‘environmental issue’ dates back to a much earlier date than those of the term ‘sustainability issue’ other associated terminologies still take on the adjective ‘environmental’. For instance, environmental journalism, environmental reporting, and environmental communication are still the dominantly used terminologies both in the literature and in the field, although there is an underlying assumption in recent years that these terms now encompass sustainability issues. In brief, the phrase ‘*sustainability and the environment*’ was adopted in order to respond to the contemporary call for ‘sustainability’, while at the same time acknowledging the distinctiveness of the term ‘environment’, and to retain the advantage of extracting from the historically well established field of environmental communication and its associated literature to inform the emerging field of sustainability communication.

The terms *sustainable growth* and *sustainable development* appeared in the early 1980s “in a range of developmental and environmental contexts” (Turner 1987: 576). Although the “*World Conservation Strategy*, published in 1980, gave considerable prominence to the sustainability concept...its precise meaning and practical applications were not presented in a detailed and operational form” (*ibid*: 576). In 1987, the *World Commission on Environment and Development* provided the now widely quoted definition of *sustainable development* – “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED 1987: 43). Understandably, the appearance of *sustainable development* as a policy objective, saw an almost immediate wave of documented efforts to define and clarify its meaning, many already noticing its problem areas (e.g. Bertram 1986; Bossel 1987; Brown 1981; Brown *et al.* 1987; Costanza and Daly 1987; Dasmann 1985; De Laet 1985; Goodland and Ledec 1987; Jacobs 1985; Khosla *et al.* 1986; Lowry and Carpenter, 1985; Milbrath 1984; Redclift, 1987; Tolba, 1984; Turner 1987). For instance, Tolba (1984) expressed the view that the case for sustainable development contained an element of imbalance between developed and less developed countries and that there was great difficulty in reshaping the global economic system to adopt a more equitable use of renewable resources.

Although efforts to clarify the term *sustainable development* started in the 1980s, the term and its related adjectives still appear to be subject to a wide array of interpretations and tend to take on slightly varying or sometimes completely different meanings when used in different contexts and when used by the different stakeholders involved in related deliberations. Filho (2000), in fact, suggests that it is unlikely that there ever will be a standard agreement on the exact meaning of sustainable development. Nevertheless, there appears to be a growing consensus that efforts

towards *sustainability* should include at least three broad components – economic, social and environmental, that there needs to be a clearer understanding of the connections between these components, and that these connections would need to be considered in the dimensions of inter- and intra-generational equality. Still, despite this emerging agreement, questions remain over which components to give precedence to or which dimensions to give the greater emphasis – resulting in yet another wave of debates in the literature about the different definitions and models of sustainability. The following two decades produced further literature defining sustainability and pointing out the problem areas in existing definitions and practices (e.g. Daly 1997; Dovers 1993; Frazier 1997; Lélé, 1991; Willers 1994), differentiating between ‘strong’ and ‘weak’ sustainability (e.g. Ayres *et al.* 2001; Gibbs *et al.* 1998; Neumayer 1999; Vos 2007; Williams and Millington 2004), and discussing the different models and varying approaches to sustainability (Bromley 1998; Faucheux *et al.* 1998; Faucheux *et al.* 1996; Mauerhofer 2007; Peet 2002/2003; Slocombe and Van Bers 1991). Adding to the more recent sustainability debates in the literature, Van de Kerka and Manuel (2008) propose what they term a “Brundtland+ definition” which gives a greater emphasis to life quality aspects. This, they say, is based on the reasoning “that sustainability without quality of life makes no sense and quality of life without sustainability has no perspective” (*ibid*: 229). In addition, they also argue that economic growth is “not a condition for sustainability”, but rather there is a need for economic development to be “within the limits set by sustainability” (*ibid*: 229). Their perspective appears to be reverting back to the earlier arguments put forward in the 1980s about the limits to economic growth (e.g. Daly 1987). It is thus easy to sympathise with the frustrations of those, like Pezzey (1997), who might have attempted to come up with a unified definition. Pezzey wrote:

A temptation when writing on “defining sustainability” is to try to distill, from the myriad debates, a single definition which commands the widest possible academic consent. However, several years spent in fitful pursuit of this goal have finally persuaded me that it is an alchemist’s dream, no more likely to be found than an elixir to prolong life indefinitely. So I see little point in expanding the collection of fifty sustainability definitions which I made in 1989, to the five thousand definitions that one could readily find today, and then attempting the toil and trouble of boiling them down together in some vast academician’s cauldron (*ibid*: 448).

Nevertheless, in this thesis, *sustainability* is intended to be taken as the overarching concept which Dovers (1993: 217) describes as “the long-term and difficult goal of reaching an ecologically sustainable state.” It is the present author’s view that Dovers’ definition provides a simple, yet a very clear description of the term. Although the terms *sustainability* and *sustainable development* are often used interchangeably (Dovers 1993), this thesis accepts Dovers and Handmer’s (1992) point that the two are in fact different. They clarified that while *sustainability* is a goal that is to be achieved, sustainable development, in turn, is the “variable process of moving towards” that goal (*ibid*: 275). Building on Dovers and Handmer’s point, a more contemporary definition of *sustainability* as a goal, would also include other forms of its pursuit such as *sustainable consumption*, *sustainable agriculture*, *sustainable business*, and *sustainable tourism*.

Although this may appear to be a mere attempt to distinguish between the noun *sustainability* from its adjective *sustainable* (thus identifying a problem in language), it is argued that this clarity is fundamental for the purpose of achieving a more widespread consensus about the meaning of *sustainability*. Perceiving of the term *sustainability* as a ‘state to be achieved’ may help undo (at least to some extent) its somewhat unfavourable reputation as an ambiguous concept. Likewise (although in a somewhat different context), Costanza and Patten (1995: 193) argue that the fundamental idea of sustainability is in fact quite clear-cut – that is “a sustainable system is one which survives or persists” and that the state of sustainability of any particular system be it biological or economical, “can only be assessed after the fact.” Therefore, what are often passed off as “definitions of sustainability are [in fact] predictions of actions taken today that one hopes will lead to sustainability” (*ibid*: 194). When the ‘state of sustainability’ to be achieved is clearly distinguished from the paths to its achievement, we can expect lesser disagreements about what an essential ‘state’ of environmental sustainability is – as this state determines the survival of the human species. Within the large body of literature on sustainability, those that have argued the merits of sustainability definitions that place the emphasis on ecological or environmental sustainability (e.g. Callicott and Mumford 1997; Dasmann 1985; Gowdy 1994; Goodland 1995; Goodland and Daly 1996;) are perhaps the ones that are better able to shed light on the so-called ambiguities of sustainability. It is also argued that differentiating ‘the state of sustainability to be achieved’ and methods towards its achievement (which varies) offers a way for stepping aside from what appears to be a never-ending (and often distracting) debate on concepts and definitions and towards advancing empirical work that may aid progress towards sustainability. Even so, we can expect that there may still be disagreements about the required steps to achieving the essential (and agreed upon) state of environmental sustainability; we can also expect vast disagreements about the desirable state of economic sustainability to be achieved, as the latter has important (and often direct) implications for the former.

As existing differences in the interpretation of the meaning of sustainability have been well discussed and documented elsewhere, it need not be repeated here in any further detail than the description above. For a comprehensive review of the historical evolution of the concept of sustainability and the term sustainable development and how different schools of thought have influenced their interpretation see Mebratu (1998) and Du Pisani (2006). For the purpose of this thesis it is suffice to deduce that the belief about the ambiguousness of sustainability and its related terms poses a problem for its communication in the news media. Within the case studies of this research, assessments on understanding of sustainability were confined to the effects of the intervention in question (e.g. training, education and campaign message aiming to enhance understanding) and perceptions about the term. The lack of a standard definition of sustainability or the fact that too many definitions exist means that journalists may not be able to articulate its meaning in their reports in any clear or consistent manner. In fact the lack of a consistent definition

of sustainability results in media scepticism towards the concept (Valenti and Cragge 2003). Consequently when the media do cover related issues the focus is on personalities and the surrounding political conflicts instead of the more essential facts on how sustainability might be achieved (*ibid.*). Hence, the above deduction strengthens the need for the proposed ‘educational approach’ (see Section 1.3 above) for achieving the intended improvement to media coverage. Through appropriate education journalists may become better equipped with the knowledge to question on and integrate sustainability more effectively in their news gathering and reporting process. Regardless of its ambiguity and associated problems sustainability remains an important concept – this is especially so when we consider the extent of its influence on policy worldwide and subsequently on the functions of governing agencies as well as those of business and industry – further emphasising the significance of its communication in the news media.

Another important point worthy of mention about the wide array of debates about the meaning of sustainability in the literature and in the political discourse is the fact that these debates have hardly reached the realms of public discourse. As Barry (2003) points out, although there has been a substantial amount of work carried out within academia to clarify the ethical, economic, political, social and cultural aspects of sustainable development, and much work has taken place within the policy-making processes at national and international levels and within non-governmental organisations, these initiatives have rarely been matched by an equivalent level of understanding and appreciation of sustainable development among members of the public. Hence, there remains a lack in public understanding of sustainability despite the fact that it concerns public life in a number of areas such as economy, society, politics and international relations (*ibid.*). A second deduction may thus be made that since the news media are in a position to function as channels of public discourse, they are in a capable position to transform the sustainability discourse from academic to public, thus reinforcing the core aim of this thesis – approaches for improving news media communication of S&E issues.

References to *consumerism* in this thesis should be taken to mean: a culture of consumption, a materialistic attitude, and a belief that these are economically beneficial. This definition derives from *Collins Concise Dictionary* (2001: 318) which defined consumerism as “advocacy of a high rate of consumption as a basis for a sound economy”, Jary and Jary’s (2000: 110) *Collins Dictionary of Sociology* which defined consumerism as “the priority[s]ation and promotion of a culture of consumption” and the online *Encarta® World English Dictionary*¹ which referred to consumerism as: (1) a “materialistic attitude...that values the acquisition of material goods”; and, (2) a belief in the beneficial outcomes of consumption; a “belief that the buying and selling of large quantities of consumer goods is beneficial to an economy or a sign of economic strength.” Hence,

¹ See encarta.msn.com/encnet/features/dictionary/dictionaryhome.aspx

the term *consumerism* in this thesis is distinguished from its other meaning: “The public movement and social trend that [favours] the protection of the consumer from improper marketing practices...” as provided in Koschnick’s (1995: 111) *Dictionary of Marketing*.

The term *environment journalism*, adopted in this thesis, is commonly used to distinguish this field as a speciality field in journalism. The variations of references to *environment journalism* is worthy of note. Freedman (2004), for instance, termed the field – ‘envirojournalism.’ Chase (1973), Krönig (2002), Rogers (2002), and Caruba (1995) have referred to the field as ‘eco-journalism’, while Dooley (2005), Wang (2005), and Krönig (2002) have used the term ‘green journalism.’ *Environment journalism* is sometimes perceived, as did Dennis and McCartney (1979), to be part of the broader field of *science journalism*. Although Detjen (2002) highlighted the need for a new type of environmental reporting termed *sustainable journalism*, a review of literature for this thesis did not find other instances where this term was used. It was assumed that a distinct field that may be termed *sustainable journalism* (as proposed by Detjen) or *sustainability journalism* has not yet emerged into prominence, at this point in time. Moreover, some have observed that in the newsroom, sustainability matters are typically assigned to the environment reporter (Keating 1994; Leal and Borner 2005a). In view of this, *environment journalism* was assumed to be the most appropriate terminology to adopt in this thesis, and the reader should assume that it includes both the reporting of environmental and sustainability issues.

In this thesis, the term *environmental reporting* refers solely to journalistic reporting of S&E issues. The term *environmental reporting* used outside the context of journalism usually refers to annual reports produced by businesses on their environmental performances and initiatives – sometimes referred to as ‘corporate sustainability and environmental reporting’².

Some variation was observed in the way specialisation in environment journalism is referred to. In New Zealand the specialisation of a reporter within a particular field is distinguished within a system of rounds (Tucker 1992). Thus, specialisation in environment journalism is typically referred to as specialisation in the *environment round*. In American and Canadian states, this specialisation is more commonly referred to as the *environmental beat* or *environment beat*³, and in some cases simply as the *green beat* (Keating 1997) or as the *earth-beat* (Lyman 1994). Depending on context, both nouns – *beat* and *round* – are used interchangeably in this thesis.

Although the terms *reporter* and *journalist* are often used interchangeably, a precise definition would differentiate between the two. Weaver and Wilhoit (1996: 248) defined *journalists* as those

² For examples, see The International Corporate Sustainability Reporting at www.enviroreporting.com and The Global Reporting Initiative at www.globalreporting.org.

³ For examples, see Bruggers (2002); George (2002); Hall (2001); Keating (1994), LaMay (1991); Rogers (2002); Sachsman, Simon and Valenti (2006); West *et al.* (2003); and, Willis (2003).

who are responsible “for the preparation or transmission of news stories or other information – all full-time reporters, writers, correspondents, columnists, photojournalists, news people and editors.” Therefore, not all journalists are necessarily reporters; for instance, copy editors, news editors and columnists may not do actual reporting work. “An environmental reporter...[may thus be] defined as a journalist who engages in gathering [and reporting] news relating to mankind’s effect on the environment and ecosystem” (Detjen *et al.* 2000: 5).

Considering the recent developments in nomenclature, within the context of this research, the generic term, *mainstream news media* is distinguished from non-mainstream *alternative news media* channels such as *community media* and *citizens’ media* which tend to have smaller target audiences. For instance, The *St Albans Neighbourhood News*, the news medium used to test the impacts of an information campaign in this research, falls under the latter category. In recent media texts, *mainstream media* are differentiated from *alternative media* channels⁴. Typically, *mainstream media* have wide target audiences and include national television stations, national radio networks, and wide circulation newspapers and magazines. The mainstream media tend to be perceived as being commercially oriented (Harcup 2005), corporate (Platon and Deuze 2003) and monolithic (Atton 2002). On the other hand, according to Atton (2003b: 267), *alternative media* may be viewed as a revolutionary challenge to the professional and institutional customs of the mainstream media; they are often based on “notions of social responsibility” and tend to replace the “ideology of ‘objectivity’ with overt advocacy and oppositional practices.” This thesis accepts the distinctions between *mainstream* and *alternative* media that the above authors have proposed.

The generic terms *mass media* and *media* are widely used in related literature and they appear to be rather loosely defined. Michaelis (2001: 9) referred to the “mass media” as channels “through which a small number of individuals are able to broadcast or publish to large audiences”, for instance “radio, television, cinema, newspapers, books and magazines.” Michaelis suggested that “the Internet and other partially interactive models of mass communication may grow in importance” in future (*ibid*: 9). In addition to these channels, Parker (2003b) included videos, movies and music recordings, in her description of the ‘mass media’. While the above two authors have included the internet as a form of ‘mass media’, the internet may also provide an arena for alternative news; for instance, *Indymedia* – the alternative web-based news medium, as Platon and Deuze (2003) have noted. Although books are generally perceived as the first form of a mass medium that emerged some time at end of the fifteenth century (Dahlgren 2001), they are not commonly regarded as a component of the *mainstream media*. Although the terms *mass media* and *media* are sometimes used interchangeably, the term *media* may include all forms of media channels both *mainstream* and *non-mainstream* media.

⁴ See for examples, Atton (2002); Atton (2003b); Deuze (2006); Downing *et al.* (2004); Frechette (2002); Couldry and Curran (2003); Harcup (2003); Harcup (2005); Platon and Deuze (2003); and, Widener and Gunter (2007).

Considering the recent developments in communication technology, and negative associations of the adjective *mass*, this thesis adopted instead the terms *media* and *mediated communication* in place of *mass media* and *mass communication*. *Mediated communication* refers to the communication contents that are implemented through a *media* channel. Dahlgren (2001) observed that recent developments in interactive communication technology, and changes to social theory has led to a tendency to remove the adjective ‘mass’ from the terms *mass media* and *mass communication*. Dahlgren noted that the “the term ‘mass media’ is seen as echoing older theories of ‘mass society,’ a perspective that today appears out of step with the complexities of contemporary social realities” (*ibid*: 9351). In addition, Munro (2001: 2) pointed out that due to its lack of representation, the fact that it can rarely be accounted for, and because of its “vagueness, overuse and ambiguity, mass has become a somewhat discredited term.” Berger (1995), as well, noted the negativities associated with the term ‘mass.’ For instance, ‘mass’ suggests “a huge number of people who are easily manipulated by demagogues,” or “a group of people who are alienated from one another and can be dangerous in certain situations” (*ibid*: 8). The term ‘mass communication’ suggests that aside from the commonality of being citizens of a country, members of the public “have only the text on the medium they are listening to...in common” (*ibid*: 8). Even so, the traditional terms *mass communication* and *mass media* are retained in this thesis as and when they are used by previous authors in this field.

The use of generic terms such as *news media* or *mainstream news media* in this thesis, which is essentially the lumping together of various news media channels as one entity, points to a limitation. Cracknell (1993: 5) cautioned against “treating ‘the mass media’ as one arena.” Cracknell suggested that the media are “more accurately thought of as a set of arenas, each of which has distinct differences in terms of the audience it can reach, the selection principles which govern it, its political significance, etc.” Furthermore, Anderson (1997: 23) argued that it is meaningless to make generalisations about ‘media effects’ when past “research suggests that there are important variations between and within the media.” Anderson further observed that mass media organisations are complexly different in terms of news formats, external constraints, “style and genre, patterns of ownership and control, news values, and the types of audiences they reach. Issues of objectivity, neutrality and impartiality impact differently upon different media” (*ibid*: 56). Although some discussions within this thesis do acknowledge the different characteristics of medium types, these aspects are not dealt with in detail in terms of the main topics of its enquiry.

Within the context of mainstream media, the term *media coverage* of S&E issues is distinguished from *news coverage* of such issues. *News coverage* refers to S&E stories covered in the news media such as prime time news and current affairs. *Media coverage* is a generic term that comprises a variety of content, including news, features, opinion pieces, editorials, documentaries,

reality TV shows, and talk shows (that are produced or co-produced by the media organisations themselves), as well as media's coverage of films, documentaries, and advertising (that are produced by external parties) that may contain environmental or sustainability elements.

In this thesis, it was necessary to differentiate *news media communication* of S&E issues as a component of the wider field of *environmental communication*. Schoenfeld (1979) pointed out that environmental communication has long and varied historical roots. Schoenfeld (1975: 20) defined "environmental mass communications" as

a two-way flow of ecological information – [which] attempts at a minimum to bring about public awareness of environmental problems, hopefully to increase public understanding of underlying principles, issues, and options, and even to engender a commitment to individual and collective action in what is seen as the public interest.

In his framework for sustainability communication, Leal Filho (2000: 17) listed "talks, discussions, interviews, use of the media, briefings, [and] reports" as communication approaches that could be used. Illustrating its wide scope, Oepen (2000b: 41) defined environmental communication in this way:

Environmental Communication [EnvCom] is the planned and strategic use of communication processes and media products to support effective policy-making, public participation and project implementation geared towards environmental sustainability. EnvCom is a two-way social interaction process enabling the people concerned to understand key environmental factors and their interdependencies, and to act upon related problems in a competent way. As such, EnvCom aims not so much at information dissemination but at a shared vision of a sustainable future and at capacity-building in social groups to solve or prevent environmental problems.

While *environmental communication* is assumed to include a variety of communication forms, and means of communication, as the above authors have suggested, this thesis focused on *news media communication* of S&E issues. As it was beyond the scope of this study, the literature reviewed – does not include the wider field of environmental communication, or its relations to environmental sociology and environmental politics – it does not discuss the various non-media sources and processes that shape public views and understanding, or the historical effects of such communication on public discourse – which would have provided a broader picture of the social processes through which S&E issues come to be socially defined as issues of public concern. This omission is acknowledged as a limitation of this study.

The term *information campaign* is differentiated from *communication campaign* which is characteristically wider in scope. According to Atkin's (1981: 265) definition,

[i]nformation campaigns usually involve a series of promotional messages in the public interest disseminated through...mass media channels to target audiences...Furthermore, information campaigns tend to prominently feature cognitive gains as a preliminary state of response; many campaigns aim primarily at creating awareness, increasing knowledge, changing beliefs, or raising salience in order to indirectly affect attitude or behaviours.

Perloff (1993) noted that *information campaigns* may be regarded as the least coercive in comparison to other social influence strategies. Individuals exposed to *information campaigns* maintain their freedom of choice, in that they can choose to either accept or reject recommendations of the campaign (*ibid.*). *Communication campaigns*, on the other hand, are not limited to the provision of information alone, but may involve a variety of communication methods, tactics, and channels; are wider in scope and outreach; and, often involve the intention of one group to change the beliefs and behaviour of another (Paisley 2001; Solomon and Cardillo 1985). Therefore, the objectives and scope of a *communication campaign* are much wider than those of an *information campaign*.

1.5 Caveats and limitations

Although the focus of this research is on news media communication of S&E issues, and is based on assumptions about the media's potentials as influential channels of communication, several caveats and limitations of this study need to be acknowledged at this juncture. Firstly, as indicated earlier, a limitation of this research is that its scope includes only the news media, which is only one of many arenas through which S&E problems could be brought to public attention. The media on their own are unlikely to bring about significant increases to public knowledge about and appreciation for the natural environment and the principles of sustainability. This is so even in today's modern age of information (Griswold and Swenson 1993). In fact, the majority of communication theorists are likely to "agree that the mass media are seldom responsible, all by themselves, for significant change in public opinion. Word-of-mouth communication and group action are likely to play key roles in later stages of opinion formation" (Maloney and Slovonsky 1971: 67); hence, stressing the need for a wider environmental communication. As emphasised by communication professor and media critic, Everette E. Dennis:

It is not enough to exhort the media to cover the environment more seriously and systematically...[T]hose who truly care about public understanding should also take into account the media's limitations. An informed public will require schools, political parties, religious organi[s]ations and other institutions of society to become part of the system of environmental information. This can happen only if systematic efforts are made by environmental interests and news sources to develop alternative information strategies, recogni[s]ing that our system of freedom of expression, while reliant on the news media, requires much more to be whole (Dennis 1991: 63).

Secondly, information alone may not be sufficient for triggering social change. For instance, in their study of links between the "Dominant Social Paradigm" (DSP) and environmental attitudes, Kilbourne and Polonsky (2005) noted that although environmental information may improve environmental knowledge and attitude, it may not necessarily result in behavioural change because of an underlying DSP. This is especially so in industrialised societies where consumption and ownership of material goods is seen as a means for self-definition rather than for physiological sustenance (*ibid.*). This poses a challenge for environmental communicators, as it means that even

with improved media communication of S&E issues, behavioural changes may not occur unless there is a simultaneous change to the DSP that Kilbourne and Polonsky have noted.

Thirdly, in some developing countries, the media may not necessarily be the most effective means for public information. For instance, Mutsheva (1999: 97) pointed out that “the high illiteracy level in rural Africa limits the effectiveness of printed media. At the same time, many people in developing countries – especially now that so many have ailing economies – cannot afford radios and televisions.” Outreach of media channels may also be somewhat limited in some underdeveloped countries. Mbuya (1992) observed that in Botswana most newspapers do not reach remote settlements, and only few are available in local languages. Botswana’s single radio station cannot be picked up in some areas of the country, “although it is supposed to be the most accessible medium in the rural areas where the education need is greatest” (*ibid*: 138). In communicating sustainable development, Smyth (1990) asserted that such communication would need to reach everyone, including the illiterate; hence, means other than the news media need to be employed. In such situations the engagement of other channels and methods of communication, such as non-formal education, public seminars, interpersonal communication, and community group discussions, would be necessary.

Fourthly, it is also important to acknowledge that in some instances other arenas of communication are likely to be more influential than the news media. Religions and their channels of communication serve as an example of such an arena. Oelschlaeger (1994) argued that religions offer irreplaceable principles that can aid the process of resolving the environmental crisis. Likewise, Northcott (1996: 38-39) asserted:

The hope that we can find peace in human life and harmony with the natural world needs the anchor, the spiritual sustenance, of the religious traditions of the world, for without that transcendent reference, environmental protest is still at risk of cynicism and boredom, despondency and hopelessness...[O]nly the recovery of a spiritual, moral and cosmological awareness of our place in the natural order, and of the independent ethical significance of that order, rooted in particular religious traditions, can enable our civilisation to begin to shift its priorities and its values in a more ecologically harmonious direction.

Four major world religions, Islam, Christianity, Hinduism and Buddhism offer “many useful environmental teachings that can serve to give a spiritual appeal to the required behaviours” in addressing global environmental problems (Kolandai 1999: 4). Clergies and teachers of these religions are often willing to incorporate environmental aspects in their religious teachings – offering a valuable channel for the communication of S&E issues (*ibid*.). In addition, religions and spirituality offer other dimensions of appeal through human communication. For instance, ‘sustainable consumption’ is a request for action among people now for the benefit of people of the future and others we share the planet with. The former being people we will never meet and the latter, people we may not necessarily know. It is hence a request for generosity and selflessness – which are two fundamental appeals that exist in all religions and spiritual belief systems and thus

contains an element of boundlessness; it opens doors to voluntary actions, and multiplication of those actions, since kindness often inspires kindness in others. In pointing out the challenges to sustainability, Orr (2002: 1459) noted that some sustainability problems that result from contending views cannot be solved via rational methods alone, but can be transcended through “higher methods of wisdom, love, compassion, understanding, and empathy.” Hence, spirituality is essential for a transition to a sustainable society (*ibid.*) and in some instances it is likely to be more influential than information communicated through the news media.

Finally, it is important to recognise that although the media, in particular film and television, are capable of capturing images of nature which in turn may serve as an awareness raising tool, a real life reconnection with the natural environment is likely to be more capable of bringing about desirable changes to environmental behaviour. As Shanahan (1993: 195) concluded:

Media should serve an environmental function as much as they can, especially by extending the reach of our awareness. However, the actual awareness must begin from an objectively real basis. Mass media, in so far as they can provide only a simulacrum of real environmental experience, are not the only or best solution (*ibid.*: 195).

Likewise, in his book, *The Age of Missing Information*, McKibben (1992: 23) noted:

There are lessons – small lessons, enormous lessons, lessons that may be crucial to the planet’s persistence as a green and diverse place and also to the happiness of its inhabitants – that nature teaches that TV can’t. Subversive ideas about how much you need, or what comfort is, or beauty, or time, that you can learn from the one great logoless channel and not the hundred noisy ones or even the pay-per-view.

McKibben further stressed the need to move away from the appreciation of nature and animals for amusement reasons, or as economic or recreational resources. We need to “understand again what once was common knowledge – that they’re marvellous for their own reasons, that they matter independently of us” (*ibid.*: 84). That understanding, he says, can come only with a direct experience of nature and an acceptance of “nature and its component parts on their own terms – small and placid and dull and parts of systems, as well as big and flashy and fierce and soulful” and a realisation that “they are there because the world belongs to them too” (*ibid.*: 84).

While media communication of S&E is important, it comprises only one of many forms and channels of communication that would be necessary for improving public understanding and appreciation of the necessity for actions and changes in behaviour. Therefore, environmental communicators should not neglect other forms of communication beyond the media. Nevertheless, as we will see in the following chapter, despite their limitations, the media have been known to have some effect on public understanding and perceptions about S&E issues, thus stressing the need for this study.

1.6 Thesis outline

Following this introduction chapter, Chapter 2 provides a review of literature on a range of aspects discussed in this thesis. It starts with a glimpse of the current state of environmental and social inequality problems and the conception of sustainability as a response to these problems. This is followed by the complexities and problems associated with sustainability initiatives – a major problem identified being the lack of deep public understanding of sustainability. Media dependency and media effects theories are then discussed in the context of S&E issues. This is followed by the media's role and responsibility in communicating these issues as proposed by researchers in the field; advocates, proponents and implementers of sustainability; and, international bodies such as the OECD and UNEP. Their concerns over the inadequacies in the quantity and quality of media coverage are then detailed. On the other hand, the difficulties journalists face in reporting these complex subjects and the constraints within which they operate are listed. This is followed by a discussion on the advantages of engaging alternative media in S&E communication considering the many problems associated with the communication of these issues through the mainstream media. Finally, the need for persuasive and effective S&E communication is introduced and a brief review of previous work in this area provided. While Chapter 2 provides academic literature on the overarching themes addressed in this thesis other aspects that are specifically relevant to the individual case studies are discussed within respective chapters. Points in the literatures that are relevant specifically in a New Zealand context are also confined within respective chapters.

This thesis does not include a general chapter on methods. Since each case study employed a distinct assessment / appraisal method, discussions on the specific methods used are detailed within the respective chapters. However, considering the lack of impact assessment methodology available in the literature for the purpose of evaluating journalism training programmes in environment reporting the methods section of the first case study in Chapter 3 provides a brief appraisal of available methods that may be considered for such evaluations. This appraisal was instrumental for selecting suitable methods for the case studies in Chapters 3, 4 and 6, and may serve to inform future studies in related areas. The case study in Chapter 5, which is an appraisal of perspectives and viewpoints rather than an assessment of an intervention, employs the survey and in-depth interview methods. Considering the general lack in available impact assessment methods for training, education and awareness raising interventions related to S&E issues, the respective methods employed for the case studies in this research are discussed in detail in terms of the rationales behind their selection, their merits, the problems encountered, and steps taken to address these problems in the hope that they may serve to inform future studies of similar nature. This research also proposes a method for evaluating understanding of and changes to understanding of sustainability which may contribute to assessment methodology in this field. Since no previously established instruments for measuring understanding of sustainability were found in the literature, a method that uses a keyword system to quantify degree of understanding was created for the

purpose of evaluating participants' understanding in three of the case studies in this research, namely the case studies described in Chapters 4, 5 and 6. The development and use of this method will be discussed further in the respective chapters.

Chapters 3 and 4 in combination provide an examination of the 'educational approach' to improving mainstream news media communication of sustainability and the environment. Journalism training and education in environmental issues are usually provided based on the assumption that this would lead to increases in the quantity and quality of reporting. Employing a *post-retrospective-pretest* method, the case study in Chapter 3 provides an impact assessment of a series of mid-career training programmes in environmental reporting organised for journalists from developing countries – thus providing a first exploration of the 'educational approach.' Recommendations for training content and evaluation are provided. The second case study in Chapter 4 provides an additional examination of the 'educational approach' within the context of tertiary journalism education. This case study provides an impact assessment of a pilot module on sustainability introduced to the curriculum of the Graduate Diploma in Journalism Programme at University of Canterbury, New Zealand using a *one-group pre-experimental design* and provides suggestions for the development of such modules. This chapter also includes an assessment of the status of inclusion of S&E topics in the journalism curriculum of New Zealand higher education institutions.

For improvements to mainstream media coverage of S&E issues it was assumed that a certain degree of media receptiveness towards a more responsible role in communicating these issues would first be needed – i.e. the 'social responsibility approach' to achieving the intended improvements. Exploring this approach, the case study in Chapter 5 provides an appraisal of New Zealand mainstream media receptiveness towards such a role. This chapter explores perspectives of the newsperson concerning suggestions for media policies in relation to environmental coverage and an educational role of the media. In addition, newspersons' responses towards related criticisms; the constraints within which they operate; and, their needs and requirements in order to improve coverage of these issues are examined.

The 'message framing approach' of implementing strategically framed information campaigns to enhance public understanding of sustainability is explored in the case study in Chapter 6 within a New Zealand context. This chapter describes the strategic framing of an information campaign on the topic of 'sustainable consumption' that draws from various strategies and recommendations on effective and persuasive communication. This is followed by details of the campaign's evaluation employing a *controlled quasi-experiment* method. Suggestions for the improvement of future information campaigns on sustainability are then provided.

The final Chapter 7 provides the discussions and conclusions of the thesis. Reviewing the core objectives of the research as laid out in Chapter 1, it discusses the potentials and limitations of the three approaches that this research set out to explore for the purpose of achieving improvements to news media coverage of S&E issues. Deriving from the four case studies of the preceding chapters it summarises their key findings and their implications. As the intent of the research was to address an identified problem in the real world, this chapter also draws attention to other interrelated factors that can determine the outreach and applicability of the three explored approaches. Finally, it emphasises that achieving improvements to media communication of S&E issues should be a shared responsibility, in which a variety of parties, including Governments, interest groups, academics, scientists, the public, and the media are required to play a role.

Chapter 2

The Problems of Environmental Deterioration and Social Inequality, the idea of Sustainability as a Goal for Action, and the Current State of their Mediated Communication: A Literature Review

“We are told that the greatest law of all is love. So our mistakes, our crimes against others and against life itself are committed because, lacking love, we cannot see that in harming anything or anyone we are harming ourself and that in consequence sooner or later we shall have to redress the balance we have upset and pay the price for what we have done. At every level effect must follow cause, as night follows day. What happens to us now, either individually, as a group, or as a nation, be it good or ill, must be the result of earlier causes set in motion by acts made, often ages ago, the seeds of which have lain in the womb of time awaiting the appropriate conditions for germination”
(Challoner 1969: 12)

2.1 Introduction

Challoner’s (1969) above account of the laws of cause and effect that govern the social world, as depicted in the theory of karma, has much resemblance to the laws of cause and effect, and balance that govern the ecological world. The current state of global unsustainability appears to be an effect resulting from a wide range of human-related causes. It is now globally acknowledged that this state of unsustainability requires urgent address. This thesis builds on what others have previously suggested – that media communication of the problems of environmental deterioration and social inequality, and of sustainability as a solution, is imperative for enhancing public understanding and support for ameliorating actions. As Seip *et al.* (2006) suggest, the success of environmental protection and enhancement measures are dependent on public support for such measures, and the extent of related media coverage, in turn, has an influence on people’s preferences over available measures.

While the preceding Chapter introduced this study’s key aim, clarified the problem it addresses, and provided an overview of its framework and scope, this Chapter will provide in further detail the various aspects from the literature that this study draws from to first, justify the necessity for this research by highlighting the present state of global unsustainability and the need for improvements to news media communication of sustainability and environmental (S&E) issues; second, explain the various theories, perspectives, and suggestions that have provided the basis for the explorations within the four case studies of this research (Chapters 3-6) which examine three approaches to improving news media communication of S&E issues – the ‘educational approach’, the ‘social responsibility approach,’ and the ‘message framing approach’; and third, lay out the previous enquiries in media studies and other commentaries that have served both to strengthen the

necessity of this study as well as to formulate key points of enquiry for the four case studies. In doing so, the chapter draws from expert and non-expert sources, empirically derived findings as well as opinions and viewpoints expressed in the literature. This is noted to be a particularly important feature of research concerning sustainability – since such research is addressing an issue of the public domain, the knowledge and perspectives of non-academic sources need to be taken into account (Hadorn *et al.* 2004).

2.2 A brief glimpse of the present state of environmental and social inequality problems

As it accounts for a major assumption of this thesis, in what follows, a brief review of the current state of environmental and social inequality problems is presented. Borrowing Challoner's (1969) metaphor of the seed, consumerism is seen as a 'seed-cause' that has brought on various effects on the environment and on human society. This section will show that although there are a few who still question the severity of these problems, growing evidence has left little room for debate about their existence or their causes.

2.2.1 Environmental deterioration and social inequality – the effects of a cause

This sub-section of the review provides only a minute fraction of a very large body of literature in the environmental sciences that ranges widely in scope and has seen substantial changes in terms of its focus areas throughout its history. As there are a substantial number of empirical examples of environmental problems and associated social consequences – even if a few examples were inspected here in great detail it will not do justice to the global scope of these problems – as it would portray the problems as if they were of a few types, confined to a few locations on the planet. Hence, while an effort is made to identify the key global environmental problems that are of concern today, this section does not include any individual case studies, but rather draws from the conclusions of comprehensive reviews of the state of these problems provided in topical textbooks and international reports.

In addition to longstanding problems such as water and air pollution, human activities have resulted in various irreversible damaging effects such as climate change, species extinction, and resource depletion – posing very real threats to present human society, while leaving future generations a heritage of environmental burden. Although in a book titled, *Man and Nature*, published almost a century and half ago, Marsh (1864) provided a detailed account of human impact on the natural environment, the exceeding of the ecological threshold, and the need for caution, environmentally damaging human activities have proliferated over the years, resulting in the state of environmental unsustainability we see today.

Air pollution resulting from industrialisation and economic activities has caused severe effects on human health over the years. According to a *World Health Organisation* estimate, “500 000 people die prematurely each year because of exposure to ambient concentrations of airborne particulate matter” (Colls 2002: 1).

Competition for water is becoming an increasingly urgent global problem. In an eye-catching publication titled, *Every Drop for Sale: Our Desperate Battle Over Water in a World About to Run Out*, Rothfeder (2001: 8) ascertained that “humans have access to less than 0.08 of 1 percent of the total water on the planet” and that even this amount was dwindling. In addition to water use for personal consumption, irrigation, and industry, water is depleted as forest destruction inevitably diminishes aquifers (*ibid.*).

Evidencing global warming, mean global temperature of Earth’s surface is estimated to have increased by 0.25 to 0.4°C over the past 20 years (U.S. National Research Council 2000). Part of the reason for such temperature increases is the growth in fossil fuel consumption which consequently increases the concentration of carbon dioxide in the atmosphere (Clarke 1991).

Because the functions of the ecosystem are so intricately connected, one environmental problem often leads to another. In, *Water: The International Crisis*, Clarke (1991: 40) noted that one of the most obvious effects of Earth’s surface temperature increase would be increases in “the rate at which water is used, notably in agriculture.” Hence, global warming poses the threat of worsening problems of water shortage, and as Houghton (2004) warns in *Global Warming: The Complete Briefing*, this may lead to other complex impacts on food resources; marine, freshwater and terrestrial ecosystems; biodiversity; human settlements; and, human health.

Species extinction rates have increased by a factor of approximately 1000 compared to an average background rate (May and Pitts 2000). As stated in Krishnamurthy’s (2003: 87) *Textbook of Biodiversity*, many recent studies show that present day species extinction is occurring at “very high rates on both local and global scales and that we are now in the opening phase of another mass extinction – this time triggered by human intervention alone”.

Noticing the rapid rate of resource consumption in the 50s, in an article in the conference report, *Man’s Role in Changing the Face of the Earth*, Ordway (1956: 994) suggested that the only way to prevent the “economy from overreaching [the] possible limit to growth...is eventually to cease to consume more resources each year than nature and man together create.” Even so, the *Living Planet Report 2006* reaffirms that the earth’s resources are being consumed much faster than their regeneration rates (Hails *et al.* 2006).

Fig. 1: LIVING PLANET INDEX, 1970–2003

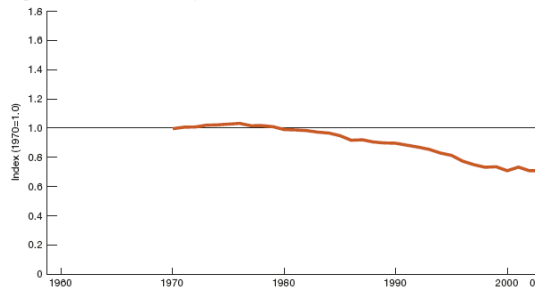


Fig. 2: HUMANITY'S ECOLOGICAL FOOTPRINT, 1961–2003

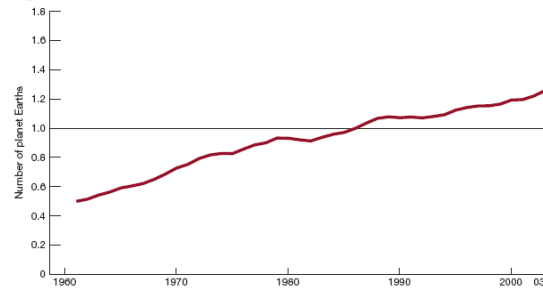


Figure 2-1 Living Planet Index and Global Ecological Footprint Calculations
(Source: Hails *et al.* 2006: 2)

As Figure 2.1 illustrates, the “Living Planet Index, which reflects the health of the planet’s ecosystems” has reduced by approximately thirty per cent between the years 1970 and 2003 (*ibid*: 2). In contrast, the Global Ecological Footprint (an indicator of the degree of human demand on these ecosystems) has continually increased, with an overshoot occurring in the late 1980s. This means that “the Earth’s regenerative capacity can no longer keep up with demand – people are turning resources into waste faster than nature can turn waste back into resources” (*ibid*: 2).

What is worse is that environmental problems often entail intrinsic elements of inequality. For instance, in an article in *Science Magazine’s State of the Planet: 2006-2007*, Gleick (2006: 59) contended that while water resource development such as the building of massive infrastructures such as dams have benefited billions of people on the one hand, it has resulted in “substantial – often unanticipated – social, economic, and environmental costs”, on the other. He referred to the displacement of tens of millions of people from their homes, over the past hundred years, as a result of such water development projects. The *Human Development Report 1998* noted:

Environmental damage almost always hits those living in poverty the hardest. The overwhelming majority of those who die each year from air and water pollution are poor people in developing countries. So are those most affected by desertification – and so will be those worst affected by the floods, storms and harvest failures caused by global warming. All over the world poor people generally live nearest to dirty factories, busy roads and waste dumps.

There is an irony here. Even though poor people bear the brunt of environmental damage, they are seldom the principal creators of the damage. It is the rich who pollute more and contribute more to global warming. It is the rich who generate more waste and put more stress on nature’s sink (UNDP 1998: 66).

The above excerpts serve only as a highly abbreviated introduction to some contemporary environmental and inequality problems. More detailed descriptions of the present state of environmental problems are provided by organisations such as the *Intergovernmental Panel on Climate Change*⁵; the *World Resource Institute*⁶; the *Worldwatch Institute*⁷; the *World Wide Fund*

⁵ See www.ipcc.ch

⁶ See www.wri.org

⁷ See www.worldwatch.org

for Nature⁸; and, in publications by Gardner and Stern (1996), Harris (2004a), and Lorey (2003), among others. In addition one may refer to the scientific journals⁹ that provide countless studies on environmental contamination and destruction, and the consequent impacts on human societies.

Despite this increasing amount of evidence, the severity of environmental problems and resource depletion has not gone uncontested, largely due to an underlying belief in technological solutions. For instance, Beckerman (1995: 65) argued that the “finite resources” claim that serves as a foundation for sustainable development is flawed since it is grounded “on a concept of resources that is static and unimaginative, and an underestimate of the human capacity to make technological progress and adapt to changing conditions.” Bailey (1993) contested the degree and severity of environmental devastation. He described how contemporary environmental claims were largely exaggerated, and serves only to alarm the public. Lomborg (2001: 12-13) regarded “the communication of environmental knowledge, which taps deeply into our doomsday beliefs” as “propaganda” presented by environmental organisations, and “readily picked up by the media.” Echoing Lomborg, Kennedy (2003: 170) argued that global warming was an unproven ‘theory’ since it was largely based on predictions and concluded that “technological and scientific progress” was the “key to improved environmental care.” Lackner and Sachs (2005) argued that the existing base of energy resources was more than sufficient to cater to the energy needs of a growing world population at levels presently enjoyed in developed countries. The solution, they say, is in the reliance on new improved technologies, the use of other energy sources, such as the conversion of coal into liquid fuels, and non-conventional sources of fossil fuel such as oil sands and shale, and methane hydrates from seabed. In a similar way, technological advancement and increased productivity is often seen as a solution to bridge the gap between the poor and rich of the world. For instance, arguing against the social inequality argument often put forward by critics of capitalism and globalisation, Norberg (2003: 153) stated:

The main reason for that 20 percent consuming 80 percent of resources is that they *produce* 80 percent of resources. The 80 percent consume only 20 percent because they produce only 20 percent of resources. It is this latter problem we ought to tackle – the inadequate productive capacity of the poor countries of the world – instead of waxing indignant over the affluent world producing so much.

The above statement may be countered as it does not take into account the transfer of raw materials from poor to rich countries to cater to the latter’s production; it does not take into account the utilisation of cheap unregulated labour in poor countries to produce ‘affordable’ goods for the affluent in rich countries. In response to the technological solution argument, Weiss (1990) maintains that while technology may be of use in handling some problems, there is no certainty that

⁸ See www.panda.org

⁹ For examples, see journals such as: *Bulletin of Environmental Contamination and Toxicology*; *Global Environmental Change*; *Environmental Health Perspectives*; *Environmental Pollution*; *Environmental Toxicology*; *Journal of Exposure Science and Environmental Epidemiology*; *Environmental Geology*; *Marine Pollution Bulletin*; *Conservation Biology*; and, *Biodiversity and Conservation*.

technology can provide effective solutions to the wide array of threats that humans are presently faced with. In addition, Weiss asserted that the cost of conservation is often lower than the cost of substituting exhausted materials using new technologies. In his review of Lomborg's (2001) *The Skeptical Environmentalist*, Alexander (2002: 46) found that Lomborg's main argument was the potentials for further growth and progress although he does not "prove that we can stay on this unsustainable path of unbridled consumerism for another century." In highlighting the role of media in environmental communication, Alexander stressed that while journalists should explore the debates on best methods in addressing environmental problems, it should no longer be a question that the problems exist.

The preceding broad-brush itemisation of globally significant environmental and social inequality problems is likely to have missed other critical interrelated problems that can further strengthen the state of unsustainability argument. Nevertheless, the reality and seriousness of these problems are often easily established based on several self-evident indicators. First, it may be associated with the prominence of global environmental agreements and treaties. There has been an exponential increase in the number of such treaties between the years 1870 and 1990 (Frank 1997) and to date there is an approximate 700 multilateral agreements and more than 1000 bilateral agreements that address a wide range of environmental problems (Mitchell 2003). Another indicator is the increase in the establishment of globally oriented non-governmental environmental organisations¹⁰ and intergovernmental environmental organisations¹¹. A third indicator is the increase in the number of research organisations involved in various aspects of S&E problems¹². These self-evident indicators and the overwhelming majority that have attested to the severity of the state of present day environmental and social inequality problems outweigh the few individuals who have argued otherwise. Furthermore, as the dates of the above publications indicate, the realisation of the ecological impacts of human activities is not recent; despite this realisation the problems appear to have grown in scope over the years. Hence, the stronger argument put forward is that global ecological problems that pose an array of threats to the planet and its inhabitants are no longer a prospect, but a very stark reality – thus providing the foundation of this thesis – the urgent need for public information of these problems and the need for urgent action.

¹⁰ For example, *BirdLife International* (founded in 1922), *International Union for Conservation of Nature and Natural Resources* (in 1948), the *World Wide Fund for Nature* (in 1961), *Greenpeace* (in 1971), *Friends of the Earth* (in 1971), and *Conservation International* (in 1987).

¹¹ E.g. *United Nations Environment Programme* (established in 1972), the *European Environment Agency* (in 1993), and the *Intergovernmental Panel on Climate Change* (in 1988).

¹² E.g. *International Union of Forestry Research Organisations* (formed way back in 1892), *Resources for the Future* (established in 1952), *The International Institute for Environment and Development* (in 1971), *World Resources Institute* (in 1982), and *International Institute for Sustainable Development* (in 1990).

2.2.2 At the source of the problem lies the seed – consumerism

If we question the above descent in the state of environmental and social equality, it would appear undeniable that these problems have a strong connection to the consumption patterns of human societies largely shaped by industrialisation, capitalism, and economic globalisation. Burgess *et al.* (2003: 261) maintain that over the preceding two centuries “the potent combination of capitalism and industrialisation has resulted in unprecedented pressure on the physical, chemical and biological systems that support life on earth.” In addition, others have noted that globalisation and capitalism contain within their operative systems aspects that create and intensify social inequality (McMurray and Smith 2001; Tisdell and Sen 2004).

In linking consumption with environmental problems, some have taken a humble stand. For example, Ölander and Thøgersen (1995) commented that a number of environmental problems can be attributed to consumer lifestyles. Naturally occurring disasters aside, it may be argued that not just ‘a number of problems’, but rather almost every single contemporary environmental problem may be traced to a cause that would either be past or present patterns of human consumption. For instance, Stern (2000) maintains that historically, environmental problems are largely the result of people’s desire for comfort, pleasure, mobility freedom, reduced physical labour, continuance of customary practices, security, power, and status; and, the organisations and technologies developed to meet these desires. In their review of studies on the environmental impact of products, Tukker and Jansen (2006: 159) reported that “housing, transport, and food, are responsible for 70% of the environmental impacts in most categories...in the 25 countries that currently make up the EU.”

Even so, it is arguable that consumption is a necessity for the functions and existence of human societies; hence, consumption in itself may not be inherently bad. However, consumption becomes a problem when it goes beyond the meeting of real needs. As Gore (1992: 221) puts it,

our civilisation is holding ever more tightly to its habit of consuming larger and larger quantities...[of] substances we rip from the crust of the earth, transforming them into not just the sustenance and shelter we need but much more that we don’t need...products for which we spend billions on advertising to convince ourselves we want, massive surpluses of products that depress prices while the products themselves go to waste...

Societies’ consumption hence becomes a problem when it resembles consumerism, which Stearns (2001: ix) defines:

Consumerism describes a society in which many people formulate their goals in life partly through acquiring goods that they clearly do not need for subsistence or for traditional display. They become enmeshed in the process of acquisition – shopping – and take some of their identity from a procession of new items that they buy and exhibit. In this society, a host of institutions both encourage and serve consumerism, from eager shopkeepers trying to lure customers into buying more than they need, to product designers employed to put new twists on established models, to advertisers seeking to create new needs.

Consumerism has become an issue of concern, not only because of its environmental impacts but also its impacts on the human psyche. Many have come to refer to it as a new type of disease – *Affluenza* (De Graaf *et al.* 2005; Hamilton and Denniss 2005; James 2007). Hamilton and Denniss (2005: 38) observe that the rise of the consumer society has been “strongly correlated with the rise in depression, anxiety, obesity and a range of other disorders.”

In summary, consumerism, which is in fact a human desire for non-need items, appears to be the ‘seed-cause’ of resource depletion, environmental pollution, and other social problems.

2.2.3 The driving forces of consumerism – the ‘seed-sowers’

Working out way back in the chain of cause and effect, we could then question the driving forces of the ‘seed-cause’. Extracting from Stearns’ (2001) above definition of consumerism, the institutions that promote and serve consumerism, in other words, those who instil the desire for non-need items, may be described using the metaphor ‘seed-sowers.’ A seed, by itself will not grow. For it to germinate, for its root to spread, for its bud to spring, it requires the right conditions – the right amount of sunlight for example, and an ideal temperature. In the same way, advertisers try to provide the right conditions by sowing the seeds of human desire.

Schudson (1986) argued that advertising is only one of many factors that shape consumer choices and values. However, as Durning (1998: 552) countered, “even if advertising is not the sole force driving up consumption, it is an important one. It is a powerful champion of the consumer lifestyle, and [it] is spreading its influence widely.” Bentley *et al.* (2004: 2) argued that although youth consumption patterns were influenced by several factors, such as knowledge, cultural values, politics, and socioeconomic status, “advertising and the media” were factors that required “special scrutiny” because of their strong influence in developing “conceptions of desirable lifestyles and personal identities.”

The use of psychology in advertising to promote consumption is of particular concern. In the 1950s, Packard (1957: 6) cautioned that the growing power of persuasive advertising had serious “antihumanistic implications” and that much of it seemed to “represent regress rather than progress for man in his long struggle to become a rational and self-guiding being.” In noting the development of this then new field, Packard described how advertisers started to explore peoples’ feelings of misery and self-doubt, and became aware that product sales would depend upon manipulating these feelings. Advertisers also began studying peoples’ “subconscious needs, yearnings, and cravings” and “began building the promise of its fulfilment into” the sales presentations of even the most unlikely products (*ibid*: 72). Hamilton and Denniss (2005: 36) observed that “Australia’s best-paid psychologists [were] not devoted to treating the distress of people with psychological problems”, but instead work in marketing, and were “devoted to

developing ways of increasing consumers' insecurity, vulnerability and obsessiveness." The employment of psychology to advertising often leads to stirring up feelings of deprivation, inadequacy, and anxiety "in a way that can be cured by possession of the" advertised product (*ibid*: 37). "Lifestyle programs reinforce the message of advertising by making us feel discontented about" our belongings (*ibid*: 37). Hence, materialism is promoted "using the ultimate form of Pavlovian association – buying stuff equals happiness" (*ibid*: 47).

However, the paradox is that happiness does not result from increments in material wealth. For instance, clinical psychologist, Oliver James noticed the lack of correlation between happiness and wealth in developed countries (James 2000). He asserted that modern consumerism was not only ruining the natural environment, but that it was also wrecking human minds. He maintains that "the closer a nation approximates to the American model – a highly advanced and technologically developed form of modern capitalism – the greater the rate of mental illness amongst its citizens" (*ibid*: 37). Likewise, many studies have attested to the lack of relationship between material acquisitions and happiness. Ehrlich and Ehrlich (2004: 215) summed it up in this way:

In the aggregate, there is abundant evidence that, once basic biological needs for food, shelter, clothing, and health care are met and a standard of living providing some leisure time and recreation is adopted, further consumption doesn't provide much increased satisfaction...The data for this are relatively unambiguous...In the United States, per capita real income (a surrogate for consumption) doubled between 1957 and 1992, but public opinion polls showed no increase in reported happiness.

Instead, as Sigman (2005) noted, the more important factors that determine people's happiness are the quality of their personal relationships, their friends and their community life.

The conception that advertising persuasively influences consumption behaviour certainly does not remain uncontested. For instance, in an earlier critique of such conceptions, Katona (1964: 61) debated that the degree of such influences are "far too small to justify the broad statements that are made about" advertising being responsible for "the manifold wants that stimulate our mass consumption society." Likewise, Ehrenberg (2000: 39) argued that advertising "is not as powerful as is sometimes thought, nor is there any evidence that it actually works by any strong form of persuasion or manipulation." According to Ehrenberg, advertising merely reinforces "feelings of satisfaction for brands already being used" (*ibid*: 47). Similarly, Schudson (1986), and Phillips (1997) argued that advertising in general was not as effective as often presumed. Bergler (1999: 423) regarded the conception of advertising's persuasive powers to be naïve because of its reduction of human behaviour to simple "stimulus-response mechanisms." He argued that the blaming of advertising was an easy way of averting self-responsibility. In an analysis of contemporary advertisements, Crook (2004) regarded Packard's (1957) and Tanaka's (1992; 1994) description of 'hidden communication' in advertising to be out-of-date. Crook countered that

present-day advertisements instead use overt communication in presenting selected messages such as product properties, to ensure their clearness and impact.

Nevertheless, others have attested to the persuasive power of advertising. In contrast to Crook's (2004) assertion about the preferences for a more overt form of advertising among present day marketers, Rockwood (1996) advises marketers that advertisements that use an emotional approach are more successful in comparison to those that use a straightforward, rational approach of providing information about product characteristics. In fact it may even be argued that in recent years, advertising has advanced to much higher levels of covertness. For example, an 'infomercial' provides advertisers with the opportunity to disguise a commercial message in what appears to be a normal programme and to visually distinguish it within its cluttered environment (Hope and Johnson 2004). 'Advertorials' are another form of covert advertising which appears like news "but are in fact often bought and controlled by advertisers" (Eckman and Lindlof 2003: 65).

Although consumers may rationalise the false associations and manipulative tactics in advertisements as Phillips (1997) maintains, Day (2000) argued that consumers are inclined to continue making future purchases despite this awareness. For instance, consumers may be quite aware that the new car will not actually deliver the status and power promised in the advertisement – yet they make a purchase (*ibid.*). This state of awareness is referred to as 'cognitive dissonance' by social researchers (*ibid.*). "The consumer is performing a behavior...for a reason that he/she intellectually knows to be untrue...This is an uncomfortable state that most humans will seek to resolve so that their actions are in line with their beliefs and knowledge" (*ibid.*: 83). Advertisers therefore repeat messages to reassure purchasers that they are doing the right thing, by re-establishing the relationship "between the product and the fulfilment of...needs" (*ibid.*: 83).

In opposition to arguments about the limited effectiveness of advertising, such as those put forward by Bergler (1999), Ehrenberg (2000) and Phillips (1997), is the question – why then the growth in advertising expenditure? Dawson (2003: 102) questioned: "...if advertising did not produce important alterations...of human minds...why in the world would corporations pour so many hundreds of billions of dollars into it?" Sutherland (1993) reasoned that advertisers continue to advertise because they know it is somehow working. Similarly, Sigman (2005: 94-95) noted:

If advertisers believed that we are spilling over with independent thought and critical reasoning, and that we are vigilant and discriminating, rational beings as we stare at the screen, would they risk paying up to \$5 million per minute (plus the same amount again in production costs) to help us believe that beauty creams will destroy cellulite and lift sagging thighs, or that an insipid lager will make a man out of an insipid mouse?

Noting advertising to be an integral component of society and the economy, Bergler (1999) argued against the necessity for its regulation. Durning (1998: 554) noted that the advertising industry often "defends itself, ultimately, by claiming that advertising, whatever its social and cultural

demerits, is an indispensable component of a healthy economy.” Advertisers claim to contribute to economic growth by urging production, creating jobs, and contributing to government revenue through income and sales taxes (*ibid.*). Durning, however, argued that the validity of such claims was doubtful:

Growth in numbers of second mortgages and third cars and fourth televisions may increase the money flowing around the economy without making us one bit happier. If much advertising is an exercise in generating dissatisfaction so that people will spend more and work harder, the entire process appears morally questionable (*ibid.*: 554).

Packard (1957) regarded the manipulations by advertisers a matter of public concern and published his book, *The Hidden Persuaders*, in the hope that it would contribute to public scrutiny. Reed (1975) argued that the use of consumer psychology in advertising was deceptive and unjust, and suggested the need for governmental regulations on such advertising tactics. The unjustness he argued lies in the fact that “advertising’s persuasive impact” is not something that is consciously understood by consumers; it is “in fact a type of subliminal influence on consumer decision making” (*ibid.*: 174). Despite accounts such as the two preceding and subsequent publications on the subject (Clark 1988; Cohan 2001; Dawson 2003; Kilbourne 1999a; Kilbourne 1999b), the issue of consumer psychology in advertising appears to not have received its deserved space in public debate.

Pointing out the role of governments in addressing the problem of consumption, Schaefer and Crane (2005: 88) suggested that one way “in which governments may be able to encourage the reduction of affluent consumption” is by “curbing the promotion of the symbolic function of consumption, most notably by regulating advertising.” They referred to examples of bans and restrictions imposed on advertising to children in countries such as Greece, Sweden, Norway and Germany. Even so, the use of psychology in advertising is not commonly perceived as an issue by the majority of policymakers in most other countries – perhaps the reason why advertisers are often left to self-regulate.

In brief, it may be put forward that in spite of growing evidence that consumerism contributes to neither social well-being nor happiness, advertisers and marketers retain the freedom to promote consumerism by making the promise of happiness and the fulfilment of needs of the human psyche. Although debate questioning the use of psychology in advertising is one that is long-standing, there appears to be very little done to control or limit its use in contemporary advertising.

2.2.4 The expansion of consumerism around the globe – spreading the seeds

A gardener with an unfamiliar seed would first do a little study to find out about the right conditions for its germination. In the same way, market researchers have already begun identifying and studying newly emerging consumers groups in developing countries. For example, Tai (2005:

200) identified a “promising [consumer] target group” in Shanghai which comprised of working women with “strong spending motivation and high purchasing power.” These women, she reports, prefer imported brands, and are less sensitive to price levels. They have high fashion senses, are willing to adopt new products, and consider themselves “modern” consumers. Marketers must carefully match their advertising messages with such important self-images (*ibid*: 200).

Consumerism, typically perceived as a problem in developed countries is now increasingly becoming a global problem. Developing countries aspiring to achieve developed status and living conditions similar to those in North America, Japan and Western Europe are promoting consumerism as a means of boosting their economies. A decade ago Wilk (1998: 314) cautioned:

With high economic growth rates in many parts of the developing world and the rapid spread of electronic media, advertising, and marketing, the next two decades are likely to see a major transformation in the consumption styles of the majority of the world’s population. The global environmental consequences will be dramatic...

Likewise, Myers and Kent (2004) noted that the emergence of ‘new consumers’ in developing countries entails major consequences both within their local environment and communities, and the global environment. For instance, the recent growth in car ownership in these countries has been so high that by 2010 the figures may reach an approximate 250 million cars, thus holding the potential to make momentous contributions to global carbon dioxide emissions (*ibid.*).

Evidencing the spreading of the seeds of consumerism around the globe, particularly in developing countries, are recent trends in the growth of global advertising expenditures. Myers and Kent (2004: 124) observe that in addition to “media images of the good life”, consumers around the world “are further influenced by advertising to the tune of \$450 billion per year worldwide”. Specifically, they noted that between the years 1986 and 1996 advertising increased “by 210% in India, 220% in Philippines, 325% in South Korea, 350% in Malaysia and Thailand, 640% in Indonesia, and more than 1000% in China” (*ibid*: 124).

Recognising the growing consumerism in Asian countries, Bromby (1994) encouraged New Zealand exporters to monitor and target consumer groups in these countries. Bromby advised:

While western companies now increasingly eye the middle class, they are also finding that there is a huge and often untapped market in the slums of India’s densely-populated cities. Selling strategies now being used for the low income groups are: introducing special low-priced brands for the slums, ensuring that smaller pack sizes are available, sponsoring events, and stressing outdoor advertising such as billboards and video vans which move through slum areas. Slum dwellers are not necessarily penniless; often they have jobs but cannot afford the higher rents outside the slums. And the number of people living in those areas is huge – 5.4 million of Bombay’s population, for example (*ibid*: 35).

As the examples above illustrate, marketers will without doubt strategically target any new emerging consumer groups in developing countries. Such targeting will extend to even the ‘slums of India’ as Bromby put it. The issue of consumerism as a growing problem of sustainability is one that is no longer limited to those in developed countries; it is global.

2.2.5 Advertising and consumerism in conflict with sustainability

Drawing from the points made in the preceding sub-sections, a chain reaction is established: Advertising → Consumerism → Environmental decline and social inequality → Unsustainability. Because of this link, indirect as it may be, advertising and consumerism may be perceived as opposing forces to sustainability. For instance, a report by the OECD (1999: 12) noted that efforts towards sustainable consumption often “run straight into powerful countervailing forces” such as advertising and media messages that attempt to influence consumption levels and style. Commercial advertisements encourage consumers to adopt materialism as a value and instil the idea that more is better (Zinkhan 1994). This contradicts the principle of sustainability, as continued growth in needs-transcending consumption, ultimately leads to consumption beyond Earth’s ecosystem adaptation capabilities and its ability to provide and sustain simultaneously. As Gardner *et al.* (2004: 20) put it: “Indeed, the underlying premise of mass consumption economics – that unlimited consumption is acceptable, even desirable – is fundamentally at odds with life patterns of the natural world.” Durning (1998: 552) asserted that “[a] world full of consumer societies is an ecological impossibility.” In addition, Maiteny (2000: 339) stressed that “[c]onsumerism and its associated behaviours are inherently unsustainable socio-ecologically and psychologically.” In the way Dawson (2003: 2) sees it, in their marketing efforts to promote consumption, big businesses are “pied-piper the human race towards ecological disaster.” Whitelegg (1997: 218) put forward that within the political systems of countries, such as Britain, the connection between “socialism [and] high levels of mass consumerism is an impediment to the achievement of sustainable development goals”. George (2002) asserted that while the western economic system proposes open-ended growth, the planet is a closed loop ecosystem. She went on to add: “The emphasis on quarterly profits, constantly rising consumption, and endless growth is squarely at odds with slow-moving but inexorable planetary forces such as climate change, deforestation and the depletion of topsoil and fresh water” (*ibid*: 73).

While inter- and intra-generational equality are two fundamental principles that form the basis of sustainable development (McCoid 2004), human consumption patterns and the forces that drive such patterns have been major contributors to a decline in both these forms of equality. Intra-generational equality, which may be defined as “equal rights for all people inhabiting the planet at this time” (Clift 2003: 240), is essential for global harmony, as without such equality, there will be conflicts between the affluent and the poor over diminishing resources (McCoid 2004). The economic gap between rich and poor nations, McCoid (2004) notes, has grown dangerously wide. The *Human Development Report 1998* affirmed that growth in consumption in preceding years had remained unequal and unbalanced resulting in “social impacts that deepen inequalities and social exclusion” (UNDP 1998: 47). A recent study by the *World Institute for Development Economics Research*, revealed the extreme degree of inequality in global wealth distribution – in 2000, while

the richest 10% of the world's adult population owned 85% of global household wealth, collectively the bottom half of the population hardly owned 1% (Davies *et al.* 2006).

Such intra-generational inequalities are partly a result of global capitalism and the resultant production and consumption patterns. McCoid (2004) upheld that inequitable consumption patterns are inherent within the global capitalist system in which the over-consumption of a few is made possible only because of the under-consumption of many, because if everyone were to consume like the rich, the system would rapidly exhaust all of the world's resources in its entirety.

Intra-generational inequity not only exists between rich and poor countries but also exists within the boundaries of each country. For instance, in New Zealand, the Parliamentary Commissioner for the Environment observed that although "some people consume a lot in New Zealand society, it is also important to acknowledge that many people are excluded from the benefits of consumption" (PCE 2004: 121).

Another aspect of advertising that opposes sustainability has to do with the social effects of advertisements. Advertisement messages can result in feelings of deprivation in society when advertised products are beyond people's economic reach (Kitchen 1994). Such a situation is especially disturbing in poorer countries, where the media promote consumption styles that the poor cannot afford (Camacho 2003). For instance, in India, Vilanilam (1989) observed that the luxury products advertised in its television channels are not affordable to ninety percent of its public, causing unnecessary frustrations among the poor. In highlighting the social consequences of hastened market liberalisations in newly liberated communist nations, Barber (1996: 15) wrote:

The right to choose between nine VCR models or a dozen automobile brands does not necessarily feel like freedom to workers whose monthly salaries can hardly keep up with the rising price of bread, let alone to women and men with no jobs at all.

Camacho (2003) maintains that the promotion of luxurious lifestyles within a society when such lifestyles are unattainable by most, could provoke corruption among its professionals, and burglary and theft committed by the impoverished out of desperation – factors that this thesis identifies as contributors to social unsustainability. O'Dougherty (2002) observes that in Brazil, the local media tend to reinforce the notion that social classes are defined by consumption levels, aggravating feelings of social class inadequacy among its community members – a life that should be, that they are denied, forcing some to acquire these goods from the black-market. Such negative impacts can intensify, with the spread of standardised international advertising¹³.

Advertising may also pose a threat to cultural sustainability. This is considering that even people's religious beliefs have not escaped consumer behaviour research. Sood and Nasu (1995: 1)

¹³ For a review of progress in international advertising research, see Taylor (2005).

suggested that because religion is a determining element of culture, it is imperative to acquire “a more complete knowledge of the dominant religion and its effects on consumer behaviour”. Their study revealed that relationships did exist between religiosity and consumer behaviour and they concluded that further research concerning “these factors holds promise for greater insight in the development of international marketing strategies” (*ibid*: 1). In another study, Barbera and Gürhan (1997) reported that highly religious people showed a negative correlation for subjective well-being and variables such as income and materialism because people with religious values tended to prioritise family and affiliation with God, over monetary accomplishments and possessions. Because of the different value structure of this segment of society, the authors advised marketers that this group may not respond to highly materialistic advertising messages, and would need to be targeted differently. They hence emphasised the importance for marketers to include religiosity in their profiling of target markets.

While the clear visibility of intra-generational inequality makes it difficult to dispute or deny, inter-generational equality, on the other hand, is an abstraction since its benefactors are not yet in existence. Inter-generational equality is often perceived, as Clift (2003: 240) notes, as “the rights of future generations, sometimes expressed as the responsibility not to steal from our grandchildren.” However, current economic activities and consumption patterns contribute to inter-generational inequality and are therefore unjust to future generations. Weiss (1990) called attention to the fact that when the present generation consume resources at a rate faster than their renewal rates, use up higher-grade resources leaving only residuum, and consume materials or species before their uses have been identified or discovered, it deprives future generations of an equitable share of the planets’ resources, as the range and quality of resources that are available for them are reduced. Burgess *et al.* (2003: 261) argued that “(un)sustainable consumption” patterns have led to the reaching of environmental limits which in turn result in “uncertain outcomes for the future well-being of people and nature.” In connecting the issue of consumerism to sustainability, Cahill (2001: 628) asserted that

present-day modes of production and consumption in the rich world are unsustainable for future generations and will be unsustainable if adopted by the poor world...[E]cologists and others who wish to effect a transition to a more sustainable society have to acknowledge the profound attachment to consumption which has pervaded culture and society in the rich world and its undeniable appeal to the poor world (*ibid*: 628).

In light of the above, what Vogt (1948: xiii-xiv) suggested sixty years ago, requires reiteration today:

[The relationship]...of man with his environment [has]...powerfully shaped many of the dilemmas and quandaries in which we find ourselves today. They are inevitably exerting a gargantuan impact upon the human world of tomorrow. Disregarded, they will almost certainly smash our civili[s]ation...If man will find a harmonious adjustment with them, as he surely can, this adjustment should make possible a greater flowering of human happiness and well-being that the human race has ever known.

In summary, securing the necessity for this research, the points raised in this section highlight the present state of global unsustainability. Drawing the connections to its causal factors it was noted that advertising driven consumerism (an intrinsic feature of the world's economic system as it functions today) appears to have caused environmental decline and generated intra- and inter-generational inequalities. The existence of wide income and resource-use gaps between affluent and poor societies show that the world's resources are not equitably shared. The present rate of resource use (which has far exceeded natural carrying capacity yet continues to accelerate) demonstrates an increasing level of inter-generational inequity. Although many have discussed the undesirable effects of advertising; questioned the ethics of its use of psychology; and, noted how it contravenes the principles of sustainability, these aspects have not been widely treated as an issue of concern in the public domain and there appears to be very little done to control or limit advertising. In light of this neglect, this thesis took upon itself the task of exploring ways in which, from the perspective of sustainability, advertising and consumerism may be addressed within the public arena. In its third case study in Chapter 5, through a survey of journalists and interviews with media managers in New Zealand, an attempt was made to appraise the degree to which the mainstream media were willing to discuss advertising-driven consumerism as an issue of public concern. In an information campaign designed for its fourth case study, detailed in Chapter 6, a special emphasis was given to consumerism and advertising as opposing forces to sustainability.

2.3 Achieving sustainability – a complex, intricate, and contested human response to global ecological and social inequality problems

As introduced in the foregoing chapter, although a range of sustainability concepts have emerged as humankind's response to its planet's growing ecological and social inequality problems, these concepts often entail varying meanings. Although the definition of 'sustainable development' provided by the Brundtland Commission – "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987: 43) – is frequently reiterated, the term still takes on different meanings when used by different parties, often contributing to confusion and scepticism about the term. For some "the joining together of the two words *sustainable* and *development* produces an effect of opposition amounting practically to an oxymoron" (Dovers 1993: 219). Valenti and Cragge (2003) observe that while some have conceptualised sustainability within a specific agenda such as conservation, others become suspicious when the term is co-opted by environmental opponents (*ibid.*). While some perceive the term to mean the retention of existing resources and the maintenance of existing 'traditional' lifestyles, others regard it to be something that requires change in resource use and human lifestyles (*ibid.*). Experts add to the ambiguity of the concept by suggesting the possibility that a specific resource (that society attempts to sustain) may alter over time, and that such alterations would lead to changes in what sustainability means from one time period to another (*ibid.*). Objectives of sustainable development provided from a business perspective are often starkly different from

those of ecologists or environmentalists. For instance, DeSimone and Popoff (2000: 233) suggested that for businesses, prospering in “the sustainability-shaped markets of tomorrow” means “proactively pursuing resource productivity” to be able to deliver “more to society from less”. In other words, it “means, first, understanding the needs of sustainable development and secondly, envisioning them as unmet market opportunities” (*ibid*: 234). Carpenter and White (2004) emphasised that the notion of “responsibility” would need to be associated with “opportunity” for the adoption of sustainability within business thinking. While the business focus on sustainability involves enhancing the efficiency of production, in contrast, as Valenti and Cragg (2003) observe, when environmental groups discuss sustainability, the emphasis is often conservation or regeneration of natural environments.

Hayward (2003: 62) argues that the “vagueness” of sustainable development “has kept it from being a useable guide for policy.” Its flexibility, Willers (1994: 1147) notes, has made the term somewhat “a chameleon, and as such it becomes a powerful tool in the hands of those who have the financial and political power and the media connections to manipulate it and to insert their definitions of it into mainstream thought.”

Definitions of sustainable development often appear growth-centred, and have thus become a subject of criticism among those who oppose the idea of unlimited growth. Even the Brundtland Commission’s definition has been criticised for being pro-growth since, as Melkote (2003) notes, it recommends economic growth to prevent environmental decline. Pointing out the utilitarian and growth-centred conceptions of sustainable development provided in documents such as *Our Common Future* (WCED 1987) and *Caring for the Earth* (IUCN *et al.* 1991), Willers (1994) argued that sustainable development was in fact a code for ‘perpetual growth.’ Although some economists, namely, Robert Costanza and Herman Daly provided a different perspective of sustainable development, whereby the concept of “growth (material increase in size)” was differentiated from the concept of “development (improvement in organi[s]ation without size change)”, their perspectives have become “well buried in the literature and...[have] had little influence on the wider use, understanding, and direction of the concept” (*ibid*: 1147).

Because of its association with the economic-growth model there has been much debate in the practicability of sustainable development. Redclift (1987) asserted that implementation of sustainable development measures would remain unlikely for the majority of governments as it would require major structural reform and changes to the international economic system. One problem, he says, is that the term ‘development’ tends to be defined as either economic growth or growth in productivity, and measured in terms of GNP. The problem is also that, as Dovers (1993: 219) noted, growth is not seen as “growth in an intellectual, spiritual, or artistic, sense [that] would be environmentally feasible; but growth as currently construed is largely a physical or material

concept.” Although the idea of ecological limits to growth was earlier suggested (Meadows *et al.* 1972), this possibility has seen rejection, debate and resurgence in the subsequent two decades (Dovers 1993: 219). Still, much discussion on sustainability “now proceeds with scant reference to possible ecological limits” (*ibid.*: 219).

Another area that has fuelled debates on sustainability is differences between developed and less developed countries. Sims (2002) noted that one point of difference between the two is their perceptions about their relationship with the environment. While in the West the natural environment is disconnected from people’s daily lives and appreciated instead for its aesthetic beauty and as venues for leisure activities, in less developed countries, many depend directly on the natural environment for their livelihoods (*ibid.*). Consequently, poorer countries argue that “the developed world has reaped the economic benefits of poor environmental practices and now it is expecting the developing world to bear the costs of repairing the damage” (*ibid.*: 32). At the 1992 Earth Summit, the complaint in industrial countries was that the reproduction rates of people in poor countries were too high, while poor countries contested that the consumption rates of industrial countries were too high (Camacho (2003). In addressing the greenhouse gas problem, while northern countries stressed conservation of rainforests (mostly located in the South) for the purpose of sustaining global carbon sinks, southern countries (needing to use rainforest resources for development) argued that “the greenhouse gas problem arose largely from fossil fuel habits of northern countries” (Lewis 2000: 248).

The *World Conservation Strategy* stressed that sustainable development “must take account of social and ecological factors, as well as economic ones; of the living and non-living resource base” (IUCN *et al.* 1980: 1). This may have given rise to the metaphor, ‘three pillars of sustainable development’, to emphasise the need to give equal emphasis to the environment, social well-being, and the economy. However, Dawe and Ryan (2004: 1459) argued that this model was faulty since “humanity can have neither an economy nor social well-being without the environment.” Instead of being perceived as one component of sustainable development, they argued that the environment would need to be appreciated as the base on which models of sustainable development stand. Moreover, Cohen (2007: 58) noted that although sustainable development is described “as a tripartite process engendering a careful balance among environmental, economic, and social equity goals”, in practise the focus is often on pursuing “environmental improvements that do not challenge conventional economic prerogatives” (*ibid.*: 58).

Discussing the Brundtland Commission’s definition of sustainability, Princen *et al.* (2002: 1) contested: “Just what constitutes the needs of today’s people remains blurred, out of focus, even usefully ambiguous: everyone has become adept at talking about sustainability without having to wade into treacherous waters of consumption”. However, in this review of the report, *Our Common*

Future, it was observed that the Brundtland Commission did provide (although not explicitly as such) a definition of human needs and that it did address the issues of consumption. For instance, the report noted that “essential needs of vast numbers of people in developing countries – for food, clothing, shelter, jobs – are not being met,” and that “beyond their basic needs these people have legitimate aspirations for an improved quality of life” (WCED 1987: 43). According to the report, sustainable development “requires meeting the basic needs of all” and requires that “the opportunity to satisfy...aspirations for a better life” is extended to all (*ibid*: 44). Therefore, in a sense, the report did distinguish between “basic needs” and other needs associated with life quality. It is perhaps the latter category of needs that requires further clarity – what are ‘needs’ that do contribute to life quality? Nevertheless, the report did emphasise that perceptions of “needs are socially and culturally determined, and sustainable development requires the promotion of values that encourage consumption standards that are within the bounds of the ecological[ly] possible and to which all can easily aspire” (*ibid*: 44).

Considering the above excerpts, it is arguable that critics of *Our Common Future* may have overlooked the fact that the report did emphasise the significance of consumption as an issue within the concept of sustainable development. Still, contemporary references to sustainable development are often detached from the issue of consumption. It is likely that with wide and varied usage, the meaning of sustainable development became reduced to simplistic terms – as a form of development – with its consumption aspect overlooked or perhaps deliberately ignored. This neglected aspect has been somewhat addressed with the emergence of the concept of sustainable consumption. As Jackson (2005b) observes, the realisation that consumer behaviour is the key to reducing environmental impact resulting from human activity, has pushed for national and international policy focus on sustainable consumption. Cohen (2005: 407) noted that the emergence of sustainable consumption offers “...a new political and academic domain for discussing the linkages between affluent lifestyles and environmental quality.” At the 1994 *Symposium on Sustainable Consumption* in Oslo, sustainable consumption was defined as,

the use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations (Norwegian Ministry of the Environment 1994 *cited in* OECD 1999: 11).

The definition of ‘need’ was perhaps more clearly defined within the Oslo definition of sustainable consumption. As noted in a report by OECD (1999: 11), five key concepts of sustainable consumption were:

- satisfying basic human needs (not the desire for ‘wants’ and luxuries);
- privileging quality of life concerns over material standards of living;
- minimising resource use, waste and pollution;
- taking a life-cycle approach; and
- acting with concern for future generations.

However, it was observed that akin to the multiplicity of definitions for the term sustainable development, sustainable consumption as well can take on different meanings when used by different parties. For example, as Robins and Roberts (1998) observe, when environmentalists call for a reduction in consumption (meaning reduction in resource use), economists would interpret this as an impingement on people's spending on goods and services. Bentley and De Leeuw (2003) suggested that a practical approach would be to acknowledge the differences in opinions and to be flexible in defining sustainable consumption as it would allow for the addressing of a variety of aspects such as consumer behaviour, efficiency in consumption, re-use, and recycling, in a manner that best fits the challenge at hand.

The above accounts are only some examples of the varying definitions and perceptions that exist pertaining to sustainability. Despite the fact that sustainability is increasingly becoming a basis for policy formulation at the national level, differences in understanding of what sustainability means and debates about how it should be pursued continue to persist. It may be argued that the ambiguities associated with the concept of sustainability, the varying definitions of related terms, and the variations of meaning depending on the context in which the terms are used, inevitably makes communicating sustainability to the public an arduous task for journalists. This in turn points to the need for journalists' knowledge building about the concept of sustainability – which necessitated the 'educational approach' examined in Chapters 3 and 4.

2.4 Sustainable consumption – an 'underdog' in the arena of sustainability initiatives

As has been established above, the state of social inequality and environmental decline are effects of a cause, hence suggesting the wisdom of a strategy that addresses these problems at their roots. Although sustainable consumption offers such a strategy, it appears to be somewhat an 'underdog' in the arena of sustainability initiatives. As Durning (1994) noted, those concerned about the well-being of the planet do not pay as much attention to human consumption as they do to other contributors of environmental decline. Although the number of documents and publications on 'sustainable consumption' has seen a rapid increase over the years, it has received little political attention in most countries, and actual efforts towards its achievement remain negligible. A global survey showed slow progress in implementing the UN's *Sustainable Consumption Guidelines*¹⁴ UNEP (2002). A report by the United Nations Economic and Social Council (2002) further noted

¹⁴ The UN General Assembly adopted the UN Guidelines for Consumer Protection in 1985. In 1999 the Guidelines were expanded to include Section G - Promotion of Sustainable Consumption (UN Assembly Decision 54/449). Section G provides a framework for governments to use in the formulation and strengthening of policies and legislation to encourage responsible consumption and production patterns, resulting in decreased environmental impacts and a more equal distribution of resources among rich and poor. The guidelines are available at www.un.org/esa/sustdev/publications/consumption_en.pdf.

that there have been no major initiatives since the UNCED¹⁵ in addressing unsustainable patterns of production and consumption.

In the United States, Cohen (2005) observes that sustainable consumption has received very little attention in government policy because it was regarded to be incompatible with established public policy priorities that favour the maintenance of economic growth, consumer sovereignty, and uninhibited material acquisitions. In light of Cohen's point, it may be argued that a possible reason for the reluctance towards sustainable consumption initiatives in other countries as well could be an underlying belief that some sustainable consumption practices may pose a threat to economic growth. As synthesised in Figure 2-2, economic growth is largely dependent on a cycle of production and consumption. Advertising and market forces that ensure a growth in consumerism and materialism in turn ensures the continuance of this cycle. As Hamilton and Denniss (2005: 101-102) note, while "the marketing industry is devoted to persuading us to buy things we don't need – and often to buy things we don't want", consumption is in fact driven by "the entire economic and political system that conspires to breakdown any resistance to buying".

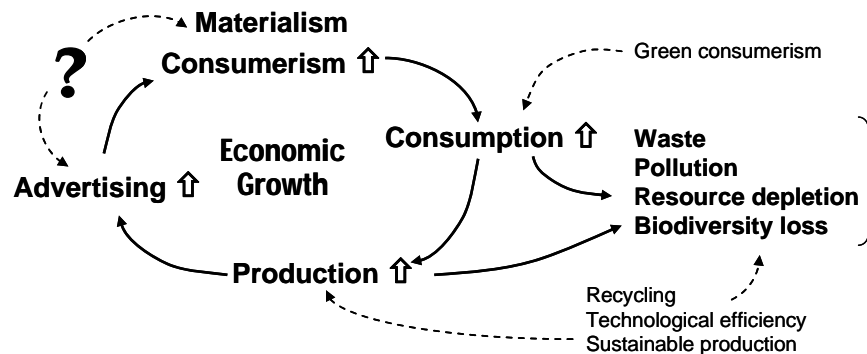


Figure 2-2 The cycle of production and consumption that churns economic growth and the resultant problem of unsustainability

The advancement of capitalism is dependent on a constant growth of the economy, and such growth is possible only if 'needs' are constantly diversified to generate an increasing demand for new products and thus the creation of new markets (James 2000). Therefore, it would appear that any disruption to the above cycle (which sustainable consumption patterns could bring about) could lead to a downturn in economic growth. Challenging the issue of consumption and consumerism then becomes a notably difficult endeavour. For Princen *et al.* (2002: 1), when consumption and consumerism are questioned they "have an awkward tendency to challenge deeply held assumptions about progress and the 'good life'; they call into question the very idea of consumer sovereignty, a cornerstone of mainstream economic thinking".

¹⁵ United Nations Conference on Environment and Development, also known as the 1992 Earth Summit – held in Rio de Janeiro, Brazil (June 3-14 June 1992).

Even in cases where policy makers take on the ‘sustainable consumption and production’¹⁶, objective they have largely focused on improving production processes (Robins and Roberts 1999) and as Cohen (2007) maintains, the challenge is often seen as a technological venture to reduce environmental impacts resulting from consumerism, with no address of the drivers of material desire. In a recent review of progress in sustainable consumption initiatives, Mont and Plepys (2008) affirm that the majority of policy initiatives have remained focused on production aspects and that there remains a lack of strategies for converting the prevailing consumerist society to a less materialistic one. As Figure 2.2 shows, while current initiatives in the name of sustainability such as ‘technological efficiency’ and ‘green consumerism’ appear to address the end-result of the problem of excessive consumption, they neglect one of its root causes – advertising-driven consumerism. Princen *et al.* (2002: 2) noted that sustainability discussions often avoid the issue of “escalating consumption levels and, especially, the roots of such escalation.” Perhaps it is the case, as Sanne (2005) suggests, that while addressing waste is uncontroversial, reducing sumptuousness and affluence, conversely, is a difficult political undertaking that requires great tact as it challenges the norms and habits of the populace and prevalent beliefs about the importance of economic growth.

Although to some degree ‘green consumerism’ appears to provide a solution, some have argued that such a form of consumerism does not encourage reduction in consumption, nor does it change the consumerist lifestyle; but instead only helps justify consumption, by lifting off a bit of the shoppers guilt and by making the shopper feel good – that their buying is helping the environment (Dickens 2004; Princen *et al.* 2002). In the same way, others have noted the limitations of ‘technological efficiency’ as a solution since initial gains from efficiency may be easily negated by increase in production and demand by way of lowered costs; although ‘technological efficiency’ aims to reduce resource intensity, it does not aim to reduce resource use (Burgess 2003; Jucker 2002; Kanner 1998; Michaelis 2001, Princen 1999; York and Rosa 2003).

In a report titled *The Media: A Resource for Sustainable Consumption* Michaelis (2001) suggested that since the media are central players in building consumer culture it is essential that they are engaged in the promotion of sustainable consumption. However, hardly any enquiries have examined how the effectiveness of mediated communication of sustainable consumption could be improved. Perhaps to some extent this lack is understandable, as “breaking into the cycles of cultural and ethical influence that surround the media” as Michaelis suggests is not easily doable (*ibid*: 5). In addition, Princen *et al.* (2002) observed that while there is “little guidance on

¹⁶ The concept of ‘sustainable consumption’ is often tied together with the concept of ‘sustainable production’, and regarded as being ‘two sides of the same coin’ – the former depicting the demand side of the equation and the latter, the supply (Bentley and De Leeuw 2003; Robins and Roberts 1999; White 1999).

consumption issues in the policy and environmental realms, the academic world” does not offer much more (*ibid*: 8-11). They went on to add that

like the policy realm, much of the social sciences has come under the sway of economic reasoning...A large body of economic literature exists on “consumer theory,” but its analytic goal is to better estimate demand curves, not to ask whether and how consumption patterns contribute to or solve social and environmental problems (*ibid*: 9-11).

Furthermore, this review found that an overwhelming majority of communication research¹⁷ concerning consumer behaviour, dating back to as early as the 1930s, has been conducted for the benefit of businesses, in that they are aimed at enhancing consumer demand for products and services, or in the least, aimed at retaining existing demands. Communication research aimed at achieving the contrary, on the other hand, is still at its infancy stages. Scholarly journals that focus on environmental communication¹⁸ are relatively few and have emerged only recently.

In summary, it may be argued that the prevalent interests in continued economic growth, and the notion that this interest cannot be challenged, are possible reasons why sustainable consumption as a principle and a basis for policy is yet to be embraced by the majority of countries. Considering the lack of relevant research, in this thesis a special emphasis was given to the concept of ‘sustainable consumption’. While its connection to ‘sustainable production’ was acknowledged, ‘sustainable consumption’ is treated here as a distinct principle of its own, to allow for a focused inspection of the demand side of consumption resulting from advertising and marketing efforts, which are, borrowing Cohen’s (2007) term, some of the ‘psychological drivers’ that shape material desire. These are dealt with in Chapter 6 – in exploring the ‘message framing approach’ an

¹⁷ Such research can be found in a wide variety of journals. To name a few, the first volume of *Journal of Marketing* appeared in 1936. *Consumer Behaviour* followed with its first issue in 1954. Both the *Journal of Advertising Research* and *Applied Marketing Research* published its first issues in 1960. These were followed by numerous other journals and periodicals devoted to the study of advertising, marketing and consumer behaviour. *The Advertising Quarterly* was first published in 1964, *European Journal of Marketing* in 1967, *Marketing* in 1968, the *Journal of Advertising* in 1972, *Journal of the Academy of Marketing Science* in 1973, the *Journal of Consumer Research* in 1974, *Advances in Consumer Research* in 1974, *Target Marketing* in 1978, the *International Journal of Advertising* in 1982, *Marketing Science: the Marketing Journal of TIMS/ORSA* in 1982, the *Journal of Consumer Marketing* in 1983, *Marketing Intelligence and Planning* in 1983, *Psychology and Marketing* in 1984, *International Journal of Research in Marketing* in 1984, *Research in Consumer Behaviour* in 1985, *Journal of consumer satisfaction, dissatisfaction, and complaining behaviour* in 1988, *Marketing to Women* in 1988, *Journal of International Consumer Marketing* in 1988, *Marketing Research* in 1989, the *Journal of Consumer Psychology* in 1992, *Journal of Targeting, Measurement and Analysis for Marketing* in 1992, *Journal of Marketing Theory and Practice* in 1992, the *Journal of International Marketing* in 1993, the *Journal of Strategic Marketing* in 1993, *Journal of Marketing Practice* in 1995, the *Journal of Fashion Marketing and Management* in 1996, and the *Journal of Consumer Behaviour* in 2001.

¹⁸ These include, *Applied Environmental Education and Communication* that started publication in 2002, and the recent *Environmental Communication: A Journal of Nature and Culture* that published its first issue in 2007, and the e-journal, *Communication, Cooperation, Participation: Research and Practice for a Sustainable Future* (available at <http://www.ccp-online.org>), with its first issue dating April 2007. Other journals that have occasionally dealt with environmental communication include the *Journal of Environmental Education*, *Public Understanding of Science* and *Science Communication*.

information campaign on sustainable consumption was designed and evaluated. Considering the suggestion for mediated communication of sustainable consumption (United Nations 2001), in examining the ‘social responsibility approach’, mainstream media receptiveness towards a role in communicating ‘sustainable consumption’ is explored in Chapter 5.

2.5 Sustainability – on the margins of public comprehension

Although sustainability has become a concept that is of global significance, some (e.g. Barry 2003; Jucker 2002; Leal Filho 2000; Oepen and Hamacher 2000; Smith 2000b) have observed that a majority of the public lack a deep understanding of what sustainability means, and that discussions concerning sustainability have remained largely confined within academic and governmental settings.

Because of the noticeable lack of public understanding of sustainability, many have stressed the need for its communication. Leal Filho (2000) commented that one problem with sustainability was that its complexity was often underestimated. He argued that a broader awareness of sustainability among the public can “only to be realistically expected, if it is better communicated” (*ibid*: 12). Because sustainable development requires a major and complex “restructuring of modern society in a global context”, Oepen and Hamacher (2000) regarded society’s lack of understanding of the rationale behind the need for such a change, as a sign of a fundamental problem in communication. Therefore, they emphasised the need for communication to be an indispensable component of any sustainability initiative. Barry (2003) concluded that the focus on communication about sustainability is essential to make the necessary alteration of it being a discourse of elites to a discourse that is more open and accessible to the community.

While some have emphasised the importance of S&E communication in a broad sense (Cox 2006; Leal Filho 2000; Oepen 2000b), others have highlighted the special role of the media. For instance, Howson and Cleasby (1996: 149) asserted that the media, in particular “television, have an important place in any transition to a more sustainable society.” They went on: “if sustainability is to capture the popular imagination and change orthodox perceptions and patterns of behaviour, most people around the world are likely to encounter it either through media, or else not at all” (*ibid*: 160). The following sections of this Chapter will address this identified role of the media in communicating sustainability in further detail.

2.6 Exploring the media dependency theory

Considering the above accounts that have noted a lack in public understanding of sustainability, this thesis shares the assertions others have made that mediated communication is one method for enhancing public knowledge and understanding. Such an assertion is justified considering signs of

people's dependence on the media for information about the environment and sustainability as proposed by the media dependency theory¹⁹.

One aspect of the media dependency theory that is of particular relevance to this study is dependency resulting from a lack of access to first-hand information in a complex society, that Jowett and O'Donnell (2006), and Rushefsky and Pantel (1998) noted. Attesting to this theory, Atwater (1988) noted that audiences rely on the media for information about environmental issues, because they rarely have direct access to related information, and they have little or no direct experiences with related issues. People may also depend on the media for information about environmental problems that are not readily visible – ozone depletion, for instance (van Es *et al.* 1996). Gooch (1995: 430-431) reasoned: “Many environmental problems cannot be personally experienced – they are either too distant, or cannot be directly seen, tasted or smelt”; therefore, “the mass media, as a communicator of information to the public...play a significant role in the distribution of knowledge.” Corbett (1995: 397) noted that for most people who lack a direct contact with wildlife and nature, “a frequent and pervasive indirect source of wildlife information is news coverage in the mass media.”

People can also become dependent on the media for environmental information in cases where there is a lack of informal or formal environmental education. Highlighting the significance of the media for environmental protection in Hong Kong, Chan (1999: 136) noted that since “formal environmental education is limited to schools, the mass media have become the major source of information on the local as well as the global environment.” Likewise, the *World Youth Report 2003* noted that much of environmental “information young people receive comes not from formal education but from the media” (United Nations 2004: 142).

Lending further evidence to the media dependency theory, many studies (Alaimo and Doran 1980; Atwater *et al.* 1985; Atwater 1988; Chan 1996; Holl *et al.* 1999; Larson *et al.* 1982; Murch 1971; Ostman and Parker 1986/87; Sellers and Jones 1973) and other observations (Leal and Borner 2005a; O’Riordan 1995; Salomone *et al.* 1990; Tabakova and Antonov 2002) have affirmed that the public do rely on the media for information on the environment and sustainability, although some variations were noted on the degree of such reliance and perceptions about trustworthiness of media information.

¹⁹ The media dependency theory was proposed by Ball-Rokeach and DeFleur (1976). They suggested that “dependency on media information” was an omnipresent condition of modern urban societies (*ibid*: 6). One form of media dependency according to Ball-Rokeach and DeFleur was “based on the need to understand one’s social world; [while] another type of dependency arises from the need to act meaningfully and effectively in that world” (*ibid*: 6).

A logical reason for dependency on media for information about the environment and sustainability could be that people are unlikely to deliberately seek out such information from other sources such as journals, reports or even websites, unless prompted. In fact, Mortensen (2000: 26) observes that although the public had the most trust in scientists when it concerns environmental issues, “they very often get their information...from the media, rather than accepted scientific sources.” On the other hand, people are likely to be exposed to S&E issues through the daily course of listening to or reading the news and consequently become reliant on the media for such information.

In brief, the above accounts give evidence for media dependency for information about S&E issues – forming a core assumption of this thesis. Moreover, Ball-Rokeach and DeFleur (1976), and, Rushefsky and Pantel (1998) have proposed that the greater the level of public dependency on media information, the greater the chances that public opinion, knowledge and behaviour will alter as a result of that information. Therefore, the quantity and nature of S&E information in the media becomes a cause for concern, if, as the above authors suggest, increased media dependence results in a greater degree of media influence. This in turn necessitates the core enquiries of this research – what might be done to improve this area of media communication.

2.7 Exploring the media effects theory

The need for improvements to media communication of S&E issues that this thesis is proposing appears imperative when we consider the extent and forms of effects such communication has caused in the past. Although the media effects theory in general has remained varied and largely inconclusive, as Durfee (2006) observes²⁰, it is nevertheless a subject of concern as effects do exist. In what follows, three categories of effects are explored: effects on the public, effects on policy, and effects on industry.

(i) Effects on public environmental awareness, knowledge, perceptions, concern and behaviour

In general media coverage of environmental issues has resulted in varied effects on the public, including both positive and counterproductive effects.

Noting positive media effects, many have associated the enhanced level of public knowledge and awareness about environmental issues with media coverage (Bowman and Hanaford 1977; Howson and Cleasby 1996; Huckle 1995; O’Riordan 1995; Sharma 2000; UNESCO-UNEP 1990). The

²⁰ Durfee (2006: 462) noted: “Decades of research on media effects have shown that the mass media have some type of influence on audiences under some types of conditions. However, the levels of influence vary from “limited” to “rather powerful.” Media effects may be cognitive (affecting thoughts or learning), affective (affecting attitudes and emotions), or behavioral (affecting behavior). Effects may be direct or indirect and short term, long term, or delayed. Media effects may be self-contained or cumulative.”

assumption that public awareness about environmental issues correlates with the relative amount of environmental news coverage was affirmed in a survey conducted by Parlour and Schatzow (1978) in Canada. In a study based in Cleveland, USA, Brothers *et al.* (1991) found that a week-long television news program on the environment significantly increased public knowledge. A Washington-based study on public understanding of the issue of global warming by Stamm *et al.* (2000: 234) found that “understanding of the connection between fossil fuel consumption and climate change was significantly related to use of major media”.

Another form of positive media effect is increases in public concern about environmental issues. Krönig (2002: 6) observed that the expansion of environmental journalism in Germany helped foster a “collective state of ecological concern” among its public. Sharma (2000: 85) maintained that as media increased the extent and depth of their coverage of GM technologies, there was a consequent increase in “public concern over the safety of genetically modified plants, within the food chain and within human foodstuffs.”

Positive media effects have also been observed in the form of environmentally-relevant behaviour. In her Hong Kong-based study, Chan (1998a) found the mass media to be a source of subjective norms that can create social pressure to encourage waste recycling behaviour. Jackson (1991) reported that extensive media coverage on the potential health risks of the chemical Alar, used on apples, created a consumer demand for organic produce. Nelkin (1987: 79) observed that in some cases unfavourable news about science and technology can have an impact on consumer choices “especially if alternative products are available.” She provided as an example, the drop in purchases of aerosol sprays following the ozone controversy.

Others, conversely, have observed counterproductive media effects resulting from media portrayal of the environment. McKibben (1992) maintained that the amplified manner in which nature is portrayed in the media results in a negative effect as it heightens people’s expectations of nature, and they may find real nature to be unexciting when it does not live up to their expectations. Knighton (1993: 14) likened landscape photography that appears in calendars, postcards, and magazines to pornography since such photography “attempts to seduce the beholder by presenting an image divorced from its actual physical context.” This consequently, Knighton says, causes people to underrate less appealing natural landscapes. Levi and Kocher (1999: 213) referred to this as the “devaluing-of-nature effect” which implies that “the commercial media’s beautiful nature scenes will cause people to lower their ratings of the value of local natural environments.” Although inconclusive, Levi and Kocher found some support for such effects in their study.

Shanahan (1996) argued that in some cases the portrayal of nature in entertainment programmes may be counterproductive. He exemplified that events within programmes that praise “the beauty

of the natural environment in comparison to the drudgery of city life” are a form of marginalisation of the environment as “it supports the basic idea of beauty, wilderness, and nature, but in no way deals with the political subtext. By making it a ‘background’ issue, it in fact lends support to the idea that the environment is already healthy, and remains so” (*ibid*: 188). Likewise, McKibben (1992: 79) argued that although nature films and documentaries may create a fondness for a particular animal species, such media content does not provide a deep understanding “of systems, or of the policies that destroy those systems.” He further commented that “the millions of feet of film” about nature in fact conveys “remarkably little information” (*ibid*: 74). He pointed out that when the narrator of a nature film speaks of a species on the verge of extinction while portraying footage of the animal repeatedly and sometimes in large numbers – to the viewer they appear numerous – it inadvertently conveys the message that the situation may not be that bad after all. Viewers are, therefore, left unaware of the actual condition of void, because they are not shown, nor would they want to watch, the weeks of waiting for the gorillas to appear, or a documentary of still trees that the primates once inhabited (*ibid*). Stressing the risks of sensationalising conservation work, Bradshaw, Brook and McMahon (2007: 570) commented on the nature documentaries led by the late Steve Irwin (an Australian celebrity naturalist) in this way: “His often unconventional antics, while entertaining, did not necessarily lead the viewer to adopt a greater respect and understanding for the species on show.” They pointed out that Irwin’s documentaries were largely based on “capturing, handling, and therefore stressing normally reclusive and clandestine species for the benefit of public entertainment” (*ibid*: 570). Referring to a BBC news report²¹ they went on to add: “One only needs to cite the pointless and abhorrent killing and mutilation of stingrays along Queensland’s coast...in the weeks following his death...to question at least some of his fans’ true empathy with conservation issues” (*ibid*: 570).

Nevertheless, Howson and Cleasby (1996) stressed the significance of nature documentaries for environmental and sustainability communication. They noted that because documentaries are longer in duration they “can contextualize and draw out complex connections” within issues (*ibid*: 157). They added that in the absence of direct experiences, documentaries about foreign cultures provide a “background cultural context” which is essential for an “audience’s ability to interpret news reports of isolated, exceptional events as part of wider dynamic systems” (*ibid*: 157).

In addition, research on media effects on environmental knowledge, concern, and behaviour have found variations in effects, depending upon type of media (Ostman and Parker 1987; Besley and Shanahan 2004), type and details of media content (Shanahan 1993; Chan 1998b), the degree of

²¹The report (dated 12 September 2006) titled – *Irwin fans in ‘revenge attacks’*, stated: “Mr Irwin, a TV personality known as the “Crocodile Hunter”, was killed while diving in Queensland when a stingray’s barb stabbed him in the chest. Since then, 10 stingrays have been found mutilated on Queensland beaches. Government officials said they were investigating the deaths and there could be prosecutions.” Available at: news.bbc.co.uk/2/hi/asiapacific/5338118.stm.

media use (Novic and Sandman 1974; Shanahan 1993), and other influencing variables. Research employing the agenda-setting theory²² on media environmental coverage as well has not resulted in consistent signs of effect. While some have observed only weak or partial agenda-setting effects for environmental issues (Atwater *et al.* 1985; Chan 1999; Gooch 1996), others, in contrast, have affirmed agenda-setting effects (Ader 1995; Brosius and Kepplinger 1990; Kwansah-Aidoo 2001; McLeod *et al.* 1987). Shanahan and Good (2000) have provided a review of other literature on media agenda-setting for environmental issues, which further points to inconsistencies in effects.

Nevertheless, as Dunwoody (2005: 21) maintains, “it is still the case that news media coverage of a topic legitimizes it in the public eye. Issues covered by the media are considered to be more important than those not so well covered.” Most people believe what is said in the news media and regard them to be credible sources of information (Corbett 2006). Durfee (2006: 462) suggested that ‘news coverage’ may have particular significance in terms of effect, considering research findings that have revealed it to be “the most uncritically accepted type of media message, meaning that audiences assume that news reports are legitimate and trustworthy accounts of the world’s reality.” In an experimental analysis, Durfee found that the way environmental and health news were framed did have an effect on how the issues were interpreted and judged by the public and ultimately on how they responded to the issues. Brothers *et al.* (1991) observed television news to be particularly effective in educating the public on environmental issues. Likewise, several other observations have indicated a tendency among public members to believe the news (Austin and Dong 1995; Kim *et al.* 2000; Robinson and Kohut 1988; Romer *et al.* 2003).

Furthermore, the realisation of the potential effects of news has in some cases led to a greater effort on the part of sources to influence the framing of news. For instance, in the case of media coverage of the controversial topic of genetic engineering, Hansen (2006: 812) noted that from the onset, stakeholders involved in this technology were aware of “the importance of managing relations with the news media in an attempt to control public debate and to curb public anxiety” concerning related issues.

(ii) Effects on the environmental and sustainability policy making process

Media coverage of S&E issues has been perceived to be important, not only because of its effects on public understanding and concern, but also because of its effects on the related policy making processes. In fact, Miller (2002) observed the media to have a rather significant role in this process

²² The agenda-setting theory, first formally tested by McCombs and Shaw (1972) showed that a correlation existed between political campaign issues that were highlighted in the media and voters’ independent judgements about the importance of those issues. Although subsequent studies following McCombs and Shaw’s did not result unanimously in agenda-setting effects, a majority have supported the agenda-setting hypothesis (O’Guinn and Faber 1991).

although it is a role that the media neither seek nor willingly accept. Frequent coverage of certain issues is interpreted as an indicator of public concern by policymakers (*ibid.*). Mutz and Soss (1997: 434) explained that since policy makers usually “do not have direct measures of public opinion on issues that they must address, they tend to use indirect indicators such as media coverage.” Miller (2002: 61) pointed out that the environmental topics journalists

choose to write about and the way they treat them engages their audiences in a profoundly emotional way. And the public concern generated by such stories thus finds its way to their elected representatives, who take media stories quite seriously, however solid their foundation. The historical correlation between the environmental issues that have been accorded a high profile and the body of environmental law enacted by Congress is unmistakable.

Highlighting the significance of media portrayal of environmental matters in the policy triggering process, Dispensa and Brulle (2003: 79) contended that without related “coverage it is unlikely that an important problem will either enter the arena of public discourse or become part of political issues.” Likewise, Hannigan (1995: 58) asserted that in transforming “environmental problems from conditions to issues to policy concerns, media visibility is crucial.”

Further evidencing such an effect on the policy making process, Ohkura (2003: 237) reported that in Japan, media coverage of pollution problems in the 1950s, together with increased public concerns, “spurred government action, leading to the enactment of a series of pollution control laws beginning in 1971.” In the United States, Rachel Carson’s *Silent Spring* (Carson 1962) first published in *The New Yorker*, in 1961, had incited legislation banning DDT (Miller 2002). In Hong Kong, Chan (1999: 146) noted that among other factors, media attention in the early 1980s had triggered public environmental awareness and “official commitment, resulting in the implementation of various environmental policies.” In a study examining the impact of investigative journalism concerning toxic waste, Protess *et al.* (1987) found that although the reportage had little impact on public opinion, it was influential in the public policy making process. They suggested that since investigative reports expose problems in the public arena, policy makers who are “directly responsible for the particular domain in which a problem is uncovered may feel obligated to take some action to show they are ‘responsive’ and ‘responsible’” (*ibid.*: 184).

As the media appears to have a function in the environmental policy formulation process, how the media covers related issues then becomes a cause for great concern. As Miller (2002: 60) notes, if a news report “exaggerates minor risks in pursuit of the sensational and the bizarre”, it “diverts public attention and resources from real ones.” Similarly, Hughey *et al.* (2004: 82) cautioned that if public perceptions about environmental issues “are incorrect the public may demand that scarce environmental management funds and expertise are used to manage less serious problems.” This in turn poses a problem for policy makers and regulators who need “to allocate limited money and personnel in ways that they know are counter to good sense and good science in response to public perceptions and pressures, while more serious problems go begging” (Miller 2002: 61).

Because of the media's ability to trigger the policy-making process, the media also functions as a channel of communication for those wanting to inform or influence this process. While on the one hand environmental groups may engage the media as a way to prompt policy formulation, as Miller (2002) observes, on the other hand, McKenzie and Rees (2007: 505) observed that "brownlash" publications such as *The Skeptical Environmentalist* that attempt "to minimize the seriousness of ecological problems and to fuel a backlash against environmental regulations" can have a significant influence on how the media present ecological issues, which in turn becomes a source of incorrect public perceptions.

While media coverage of S&E issues can trigger policy formulation, media coverage is also necessary for public support towards such policies. For instance, McKenzie and Rees (2007: 505-506) asserted that:

Addressing the ecological crisis depends on there being public consensus as to its scope and sufficient public concern to motivate political action. In order for there to be public support for policy initiatives to address ecological problems, there must be widespread understanding of the severity of such problems, and thus the way ecological problems are represented in public discourse is crucial.

(iii) Effects on industry

In some cases, media coverage of particular issues has been known to have an effect on industry operations. Smith (2000a: 168) noted that media coverage of the conflict between Greenpeace and Shell over *Brent Spar* (a redundant oil installation in North Sea) resulted in a profound impact in "transforming business thinking about sustainable development". Sharma (2000) observed that negative reporting of genetic engineering in the media had forced industry to be more cautious about their operations. For instance, in Europe retailers "responded by forming a consortium to ensure that no genetically modified...ingredients [got] into their own-label products" (*ibid*: 82).

In summary, this review found that media coverage of the environment has had both positive and counterproductive effects on the public. Effects may vary depending on media type, content type and degree of media use. It may be argued that although environmental media content in general has not resulted in any consistent patterns of effect, environmental news in particular may have particular significance in terms of its potential effects. The relevance of the above observations for this study is that they help build the argument that effects on the public *do* exist. In addition, they affirm that the media *do* have an influence on related policies, and that they *do* have effects on industry practices. Collectively, these observations point to the need for improvements in the quality and accuracy of media coverage of these issues to ensure that future effects are more positive in nature. This thesis therefore focused on how such improvements might be achieved.

2.8 Exploring media social responsibility

Despite the long established conception of media social responsibility (Rivers and Schramm 1969; Nerone 2002), when it comes to the environment and sustainability, the media appear to be almost exempt from responsibility. Michaelis (2001: 6) reasoned that the media remain largely uninvolved in sustainability initiatives because they are not subject “to the legal impetus or the lobbying that has forced firms and governments to take the sustainability challenge seriously.” It may also be “partly because they are not much affected by environmental regulation – their product is ephemeral and does not pose direct environmental problems. If the indirect environmental effects of the media were clearer, the situation might change” (*ibid*: 42).

Nevertheless, some media organisations have demonstrated a form of ‘environmental social responsibility’ concerning their daily operations. For instance, Australian newsprint producers and publishers have established a voluntary *National Environmental Sustainability Plan* (2005) which includes recycling, and, energy and water conservation. While such a plan exemplifies environmental social responsibility in terms of how a media organisation runs its establishment, others have suggested that because S&E issues have social and democratic importance, it is the media’s social responsibility to present them to the public. Moreover, as has been established in the preceding sections, people are dependent on the media for S&E information, and exposure to such media content results in a variety of effects on public knowledge, public opinion and the environmental policy-making process. Because of such dependence and effects, others have stressed that there needs to be a responsibility on the part of the media in covering these issues, suggesting the need for what might be termed a ‘social responsibility approach’ to achieving improvements to news media coverage of these issues. More specifically, the suggestions put forward appear to be pointing to two closely connected ways through which the media might express such a social responsibility, i.e. through a *principle of media responsibility in environmental education* and through the establishment of *media environmental policies*. While the former may be largely voluntary in nature, the latter would mean a set of standards or ‘codes of practice’ that will most likely be in the public domain to which the media would need to be accountable for.

2.8.1 The suggestion for a principle of media responsibility in environmental education

Public dependence on the media for information about S&E issues, and the consequent effects resulting from this dependence have given rise to the notion of media responsibility in providing such information in a manner that enhances awareness, changes values, and encourages actions – thus a responsibility in providing a form of environmental education, bringing forth the need for a *principle of media responsibility in environmental education*. Such a principle would suggest that

since the media can have an educative effect albeit unintentionally, they need to cover S&E issues in a responsible manner. Such a theory could also suggest that the media take upon themselves a responsibility to intentionally educate.

The educational effect of the media is not a recent observation. Stein (1960), for instance, noted such effects over four decades ago. More recently, the media have come to be seen as a channel for environmental education (Nitz 2000). However, a principle that suggests an educational responsibility of the media is disputable considering that the media's educational effects are often not intended or planned. As Fenstermacher and Cuthbert (1989: 81) noted, it is unclear "that we are educating when...[an] individual 'picks up' information about the world from persons who did not plan to teach this information and had no intention that someone would learn it." Nevertheless, exposure to mass media contents "may be instructive even though it is not education in a purposeful sense"; hence, the mass media are often perceived as a source of "informal education" (*ibid*: 81).

Even so, others maintain that the media are limited in their capability as environmental educators. Sandman (1974: 218) suggested that for the mass media "to be effective agents of environmental education", news would need to be "persuasive"; however, persuasion is a serious violation of journalistic traditions. In addition, he put forward that the "three classical roles of the mass media: information, entertainment, and persuasion" were not fully in line with the objectives of environmental education, which include enhancing knowledge about the environment and related problems, and, building skills and motivation towards problem-solving (*ibid*: 211). Shanahan (1996) argued that the media are not structured in a way that is necessary for the promotion of pragmatic change in addressing environmental issues. He pointed out that the media are not positioned to "*measure or discover*" environmental destruction; they do not "produce programs to make sure that people *understand* that environmental harms are something that have economic and personal consequences"; they do not "adopt a *consistent* position on environmental issues"; and they do not "proactively seek to inform people" with the intent to create environmental awareness (*ibid*: 180). Most media organisations, he says, would regard such an expectation of the media to be "impossibly naïve, or even malevolently socialistic" (*ibid*: 182). Lacey and Longman (1993: 207) noted that although the press are able to educate, "this process is highly selective, [and] it can contradict espoused editorial policy". Heselink and Goldstein (2000: 137) noted that "a significant body of education research" has contested the use of mass media as an effective way to trigger social change.

On the contrary, because of the media's capacity to affect public knowledge, awareness, opinion, concerns and behaviour, others have stressed their educational role in communicating S&E messages. For instance, in contrast to Sandman (1974), Parker (2003b) suggested that the aims of

mass media messages – to inform, to entertain and to persuade – were pertinent for communicating environmental sustainability since the three in combination have the capacity to effectively raise awareness and stimulate action among message recipients. Ben-Peretz (1980) argued that the responsibility of environmental education cannot be limited to teachers alone, considering the field’s interdisciplinary nature, its broad target audience, and its wide range of objectives. She stressed that all available media should include environmental aspects in their programmes and that an intensive effort to ensure such inclusion would be necessary. Highlighting the role of the media in the sustainability discourse, Harris (2004b: 15) suggested that the media could “play a role in educating the wider public on environmental concerns, and how their activities can influence sustainability.” Considering the influential power of the mass media and the heavy public reliance on them as information sources, Howson and Cleasby (1996: 156) stressed that central sustainability messages “must come *through* the media if they are to have any significant impact on majority attitudes and behaviour.”

In some cases, members of the media themselves have recognised their responsibility in environmental education. For instance, in the 1970s, Schoenfeld (1977: 63) noted the emergence of what he referred to as a “new breed of environmental reporters” who made significant contributions to environmental education by providing “in-depth interpretive or investigative reporting” in an attempt to clarify the complexity of the subject they covered. Also recognising the media’s responsibility in environmental education, Titus Mbuya, editor of a newspaper in Botswana commented:

...local journalists have the responsibility to keep the public fully informed about the state of their environment and to provide alternative models of development where it is feasible – thereby encouraging authorities to see the need for urgent action to safeguard the environment and its natural resources. This is the challenge before all media workers in Botswana – journalists, columnists and cartoonists alike (Mbuya 1992: 140).

In addition, the second clause of the *Code of Ethics for Environmental Journalists*²³ ratified in 1998 stressed that because the media are often the only source of environmental information for the public journalists have a responsibility towards public awareness about environmental issues and encouraging environmental action.

Based on research findings on media effects, many have reiterated the educational role of the media in enhancing knowledge and awareness about S&E issues. Chan (1998a: 324), for instance, concluded that in light “of the great influential force from the mass media, the Government and environmental groups should step up their publicity forces in the media to educate” on the importance of environmental behaviour. Observing the link between media coverage and public

²³ The Code of Ethics, containing eight clauses, was ratified on October 19 - 23, 1998 at the 6th World Congress of Environmental Journalists held in Colombo, Sri Lanka. The Code is available at the Website of the International Journalists’ Network: www.ijn.net.org.

awareness for other issues, Sudarmadi *et al.* (2004: 182) recommended: “Non-formal environmental education through popular mass media, including radio, television, films and other means, should be used more widely and frequently to inform the public about environment problems...”. Having observed the impact of television environmental news on public knowledge, Brothers *et al.* (1991: 28) concluded the “TV news format” to be “an effective way to educate the public about...environmental issues.”

The educational role of the media has also been emphasised at a global level by various bodies of the United Nations and in international environmental treaties. For example, engaging the informal education function of the mass media was one of UNESCO-UNEP’s (1990: 15) recommended strategies for the development of environmental education. The media’s role “in value change for sustainable development and planetary survival was the theme of an international gathering of environmental journalists, co-sponsored by UNICEF and the Global Forum on Media and Value Change for Human Survival” held in Okayama, Japan, in 1993 (Grossman and Filemyr 1996: 177). The United Nations’ *World Youth Report 2003* noted that in spite of the fact that the media are driven by other non-educative objectives, they do have the capacity to be “a powerful tool for education” in particular when there is adept environmental journalism (United Nations 2004: 142). Article 13 on ‘Public Education and Awareness’ of the international treaty, *Convention on Biological Diversity*, requires contracting parties to: “Promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes.”²⁴ More recently, the educational role of the media was reemphasised in the *United Nations Decade of Education for Sustainable Development* (2005-2014) implementation plans. Its draft implementation scheme stated: “Journalists and media organi[s]ations have an important role to play in reporting on issues, and in helping raise public awareness of the various dimensions and requirements of sustainable development” (UNESCO 2005a: 25). In a subsequent implementation scheme, the media were referred to as “the informal education sector” (UNESCO 2005b: 30). The role of media was emphasised in this way:

Because of its broad and deep impact, the media has a very important role to play in advocating for a more sustainable future. Media can share information and knowledge thus raising public awareness. The media can also change attitudes, mobilize support, and in the end alter policies. The media holds a pivotal advocacy position...[in education for sustainable development] (*ibid*: 17-18).

Collectively the above accounts give rise to the notion of a *principle of media responsibility in environmental education*. Even so, the receptiveness of the mainstream media towards a role in environmental education has hardly been explored in related literature. In view of this lack, the

²⁴ For the full text of the Convention see: www.biodiv.org/convention/convention.shtml.

case study in Chapter 5 of this thesis provides a preliminary exploration of the ‘social responsibility approach’ by examining mainstream media receptiveness towards such an educative role.

2.8.2 The suggestions for media environmental policies

Many have contended that the practise of media environmental social responsibility needs to extend into media contents and that this needs to be clearly expressed in official policies of the media, bringing forth the need for *media environmental policies*. These suggestions are largely based on a belief that media’s increased commitment to S&E issues coverage, expressed in the form of editorial policies, codes of conduct, or corporate social responsibility aims could lead to enhanced and improved coverage of these issues.

In their analysis of media and entertainment companies in Europe and America, Peck *et al.* (2004: 15) found that most of these companies view their corporate social responsibility in terms of “the direct effects of their immediate operations rather than on content and programming” although their major impact derives from the second area. They suggested that considering the significant role these companies play in shaping societal thinking and behaviour, the focus of media social responsibility would need a shift of focus to their content. Likewise, Michael Hastings, head of corporate responsibility at the BBC commented that while it is important for the media to address corporate social responsibility in their operations such as energy usage and waste management, the media’s key impact is in their communication of the issues so that the public can learn the options available for the practice of responsible actions for sustainability (Hastings 2004). Smith and McConachy (2005: 52) suggested that since “information presented on screen has the potential to influence millions of people”, screen production companies in New Zealand could incorporate environmental messages in their products, as one way of portraying environmental responsibility.

The lack of corporate social responsibility aims in terms of environmental coverage is likely to be the case for the majority of print and broadcast media worldwide. Any existing policies within the media sector are more likely to concern journalistic norms and rules rather than content. For instance, the Head of Environmental Management at the BBC informed Porter and Sims (2003: 11) “that their environment policy addressed the corporate activities of the organisation, not editorial policy.” Michaelis (2001: 24) observes that it is only in “a few cases, such as that of CNN and of some public broadcasting services, where a corporate commitment on the part of media management leads to special attention being paid to environmental issues.” Chait (2002) noted the lack of environmental broadcasting policies among broadcasters in South Africa. In the U.S., all environmental journalists in Yang’s (2004: 101) study “insisted that their newsrooms do not have any written or unwritten policy about environmental newsmaking, and that the same [was] true for other news beats.”

On what has now come to be recognised as responsible journalism through a process of evolution in the definition and presentation of news since the ratification of the U.S. Constitution, Nerone (2002: 187) argued that by maintaining editorial neutrality, focusing on entertainment, and thus avoiding controversy, the media may have come “to seem responsible without embracing the totality of social responsibility theory”. “Fairness and balance coupled with a more objective writing style came to be accepted as the rule” replacing “fiery opinion and rhetoric” (*ibid*: 187).

It is perhaps this lack of totality in media embracement of social responsibility that has led to recent suggestions on the need for official media policies concerning S&E coverage. For instance, Spellerberg *et al.* (2006) suggested the need for an addition of a new ‘environmental standard’ to the *Code of Broadcasting Practice* in New Zealand. Musukuma (2002: 17) reported that journalists of the Media Enviro-Forum in Zambia, have “been calling for deliberate editorial policies to develop environmental reporting” as they believed such policies to be necessary for improvements to environmental journalism. Chait (2002: 12) argued that environmental broadcasting policies and guidelines are “vital if broadcasters in South Africa are to fulfil their environmental responsibilities” in informing public thinking and to “keep South African audiences knowledgeable about sustainable development.” Likewise, Porter and Sims (2003) suggested that an official policy commitment among broadcasters would be an important step forward in addressing the need for public awareness of sustainability. They argued that such a policy commitment would not compromise a broadcaster’s independence, as some may assume, but that in contrast it would provide media organisations with several advantages. In identifying one such advantage, they noted that since broadcasters are already contributing “towards implementation of principle 10 of the Rio Declaration which requires states to facilitate and encourage public awareness of environmental issue”, an explicit placing of this responsibility on broadcasters’ agendas (through the establishment of media environmental policies) may encourage governments to provide broadcasters with the necessary funding to accomplish this goal (*ibid*: 22). In addition, they suggested that the media’s open commitment to cover sustainability issues would “improve transparency and accountability by encouraging a public debate about whether it is being done properly” (*ibid*: 22).

While suggestions for media policies on S&E issues have been reiterated, very few have examined the existence of such policies within mainstream media organisations or their receptiveness towards such policies. An exception is a study by Mutsheva (1999) which found that four of eight mass media organisations in Botswana indicated having policies on the coverage of environmental issues. Porter and Sims (2003: 4) drew attention to “Radio Television Hong Kong [which] has already made a policy commitment to environmental programming”. In light of this gap in research, media receptiveness towards policies on S&E issues coverage was addressed in Chapter 5 of this thesis in the context of New Zealand mainstream media, thus providing a preliminary

exploration of the viability of the ‘social responsibility approach’ of establishing *media environmental policies*.

2.9 Can the media, a traditional domain for the promotion of consumerism, communicate counter messages on sustainability?

Because of their commercial interests, the media are often perceived as somewhat controversial channels for communicating sustainability. As Laird (1993: 22) commented, while the media have “tremendous power to alert people about the global environmental crisis” they also have “tremendous power, in [their] traditional alliance with commercial interests, to facilitate proliferation of lifestyles that destroy global ecology.”

The majority of media rely on revenue from advertising (Hiebert and Gibbons 2000). Understandably, therefore, most critics of consumerism point to the media as significant promoters of materialism and consumerism. Cahill (2001: 628), for instance, asserted that it was through “the mass media and the process of globali[s]ation” that consumerism “has become an ideal for people all over the planet – a way of life to which millions aspire.” In the way Anderson (1997: 18) sees it, although “the media form only a part of the processes of globali[s]ation” they nevertheless do “play a central role in lubricating consumerist ideologies.” In a study that had set out to establish if television viewers adopted “the central message of commercial television (materialism)” as proposed by cultivation theory, Harmon (2001: 405) found “some strong links between materialism and overall TV viewing.”

Advertising is also often perceived as a force that can threaten the impartiality of a mass medium. Sharma (2000) maintains that although media coverage of industrial pollution and endangered biodiversity peaked just before the 1992 Earth Summit, reporting quickly phased out, because ‘media conglomerates’ became aware that such trends in reporting could affect profits and cause a depression in corporate investments. Hessing (2003) asserted that the commercial interests of newspapers and their reliance on advertising revenue lessens their neutrality and consequently their reliability as sources of environmental news. Providing an account of an incident indicative of media’s commercial bias, Gelbspan (2004: 80) noted that when an editor of a television network was asked why the network’s news broadcast did not cover the connection scientists had made between the increase in extreme weather events and global warming, the editor “confided, [that] the industry basically intimidated the network into dropping this connection from its coverage...If the network persisted, it ran the risk of losing a lot of lucrative oil and auto advertising dollars.”

Because of the media’s commercial interests, their role in communicating counter messages such as environmental protection and sustainability has become the subject of much dispute. A general assumption is that because of their profit-making objectives, the media are limited in their ability to

communicate environmental issues. In their analysis of the media's role in educating for sustainability, Howson and Cleasby (1996: 150) noted that a key concern would be the question of "how far media institutions arise out of and are steeped in an unsustainable consumer culture and are therefore predisposed to be unsupportive of any change liable to undermine that culture." Sims (2002: 35) asserted that commercially-supported broadcast stations "can only survive by creating a context in which adverts can happily sit among programming. On the other hand advertising supported broadcasters cannot bring environmental issue to the viewers' attention unless they bring in revenues." Providing past examples of corporate control over media content, Edwards (1998) argues that only programmes that are able to boost business interests are supported by advertisers and thus tend to prosper; programmes that are potentially a threat to business interest tend not to receive advertiser support and thus become sidelined. Because of their profit-seeking objectives, he says, "the media are extremely vulnerable to business pressure of this kind" (*ibid*: 20). Likewise, Herman (1999) argued that although the television media occasionally report and discuss environmental problems, they would be restricted by advertiser hostility to programmes that seriously blame industry for any environmental damage. In a comparable manner, Shanahan (1993) raised questions about media effectiveness in environmental communication considering the commercial realm within which they operate. In a subsequent publication, Shanahan (1996: 182) noted that the media are only "slowly adopting a lite-green form of environmentalism to gratify public demand without subverting the corporate agenda." Therefore, while some television programmes may reflect a "romantic[s]ed notion of environmentalism," on their own they are insufficient to "contradict the massive messages of consumption and individualism that pervade corporate culture" (*ibid*: 182).

The perspective that the media's commercial interests would be an impediment to their communication about S&E issues appears to be evident across many countries. Because of the German media's commercial interests, Krönig (2002: 11) observes that when environmental stories do make it into print, "they tend to be sensationalised and hyped, only to miss the real point." In addition, Krönig observed that editors are often unfavourable toward messages that warn of diminishing resources as such messages do not go well with the media "message to be happy and consume"; nor are editors fond of overly "critical articles about oil and life science companies" as they are well aware that such articles "could have an impact on the volume of advertising their paper depends on" (*ibid*: 11). Krönig further stressed that such a trend was not confined to Germany alone, but that it was more evident in Britain and in the U.S., and that it was spreading worldwide through globalisation processes. Dispensa and Brulle (2003) reported that the media in the U.S. have given priority to perspectives that question the reality of global warming because of their vested interest in the fossil fuel industry. By casting doubt and distorting public view about the problem, they say, the media prevent "the change needed in society to reduce consumption and preserve the environment" (*ibid*: 99). In an analysis of U.S. newspaper coverage of the issue of

environmental pollution, Kenix (2005: 67) noted the “heavily weighted coverage towards upper-socioeconomic groups” to be an indication of the strong influence of advertising over media content. She suggested: “Advertisers may be exerting pressure – either indirectly or directly – on media managers in their search for consumers with more buying power” (*ibid*: 67). In Africa, Okigbo (1995: 4) observed that while the media have been successfully “used to achieve very significant results in the commercial areas of product and service advertising” and to build the corporate image of private companies, it has been largely unsuccessful in the emerging sphere of sustainable development.

Journalists, however, may not be clearly aware of how a medium’s commercial interests might have an effect on their reporting. In a survey of environmental reporters, Goodell and Sandman (1973: 46) observed that “most reporters were peculiarly ambivalent about advertiser-inspired pressure. They admitted the generality of the phenomenon but denied its application to themselves.” Likewise, Yang (2004) reported that environmental journalists believed that they were independent in their relationship with the parent companies of their media organisation and denied any influence from corporate advertisers on newsroom operation or news content. Sachsman *et al.* (2002) found that compared to other factors, environmental reporters perceived advertisers as posing very little barrier to environmental reporting. In the same way, Sachsman *et al.* (2006) found that environmental reporters in all four regions of their study in the U.S. did not perceive advertisers to be a major barrier to environmental reporting.

In view of the above, it appears that the perspective that the media’s commercial interests would impede their ability to effectively communicate S&E messages may be one that is more commonly shared among media critics rather than media personnel. To seek further clarifications on this difference in viewpoint, this study sought to gain perspectives directly from the newsperson. As detailed in Chapter 5, media managers were questioned whether concerns over advertiser interest would be an impediment to their coverage of sustainability related issues. Reporters were asked to indicate if an implicit expectation to protect advertisers and sponsors was a factor that had an effect on the quantity or quality of S&E issues reporting in their organisations.

Despite the above scepticisms about the media’s capacity to communicate S&E issues, as has been detailed in Section 2.8, many have emphasised the necessity for their engagement in environmental communication and some have stressed their educational role. However, as we will see in the following sections, this places a high expectation on the media, and on the individual journalist who is often constrained by journalistic routines and ill-equipped in terms of training and background knowledge, let alone the necessary skills to play the role of a public educator.

2.10 The many inadequacies of media coverage of sustainability and the environment

As noted in the preceding chapter, the objective of this research, i.e. to explore approaches for improving news media coverage of S&E issues, derived from previous criticisms that have been put forward and concerns that have been expressed about lacks in media coverage of these issues. The environment as an issue of human concern may have gained the mainstream media's attention at some point in the 1960s (Grossman and Filemyr 1996; Keating 1994; Miller 2002). However, as Archibald (1999: 27) noted, ever since "the environmental news beat" was established

news coverage of the environment has been the subject of intense scrutiny and criticism. Environmental activists, industry representatives, politicians, scientists, academic researchers, and even journalists themselves have all been highly critical of how the news media cover the environment.

As it serves to support the rationale for this study, this section provides a review and analysis of these identified inadequacies of the news media. In noting the many criticisms and concerns, this review draws from a variety of empirical studies as well as critical commentaries and non-empirical perspectives. As clarified in the introduction of this chapter, the latter was considered essential since S&E problems are public in nature – hence, non-empirical perspectives need to be taken into account in related research. In recent years, scrutiny over media coverage of S&E issues has extended to non-news media content – these are also included in this review. Considering that S&E issues are global in scope, this review gave an emphasis to including studies conducted in other countries in addition to UK and US-based studies – thus pointing out the global scope of the concerns that have been expressed and in turn highlighting that the need for improvements to news media communication of S&E issues is not one that is restricted to a few countries.

It was noted that the majority of studies on the media-environment topic have employed the *content analysis* method which is a commonly used method in media research (Berger 2000). This method uses a system of clearly defined categories to classify and describe media content (*ibid.*). A limitation of this method is that on its own it cannot serve as a ground for determining media effects (Wimmer and Dominick 2000). A smaller number of studies have employed the *discourse analysis* method – within the context of media communication this method focuses on the language used within a communication (Van Dijk 1985). A few studies have extracted the perspectives of newspersons using the conventional survey and interview methods. These methods are of course not without flaws²⁵. The empirical studies cited in this section are admittedly varying in terms of their strength which is dependent on the size of their samples in addition to the strengths and weaknesses of the methods they employ. Regardless, these observations were of value to the present study as they were instrumental for establishing a set of frequently identified inadequacies

²⁵ For detailed descriptions of the strengths and limitations of these methods see Berger (2000), Fowler (1984), Wimmer and Dominick (2000), and Van Dijk (1985).

of the media in their coverage of S&E issues. Following a broad analysis of the trends and commonalities between the various studies and commentaries on this topic, this review derived a set of key points of criticism which were then divided into twelve distinct categories as detailed in the sections that follow. In addition, this review also attempted to analyse and point out the underlying views and assumptions that may have formed the basis for these criticisms. Criticisms of media coverage of environmental issues have focused not only on prevailing perceptions of the uses and functions of the media (Schoenfeld 1975), but also on journalistic routines and norms as impediments to the reporting of S&E issues. Therefore, it was relevant for the purpose of this study to highlight the connections between journalistic determinants of news and the points of criticism, as this was necessary to formulate key points of enquiry and for the development of specific research questions for the individual case studies (detailed at the end of this section).

Galtung and Ruge (1965) identified twelve inter-connected factors that determine how events are deemed to have news value in Western media. These were: (1) frequency; (2) amplitude (intensity); (3) unambiguousness; (4) meaningfulness (cultural proximity and relevance); (5) consonance (predictability and demand); (6) unexpectedness; (7) continuity; (8) composition; (9) pertaining to elite nations; (10) pertaining to elite people; (11) personification (reference to persons); and, (12) negativity. However, since the nature of S&E issues often does not fit neatly with these news value criteria it appears to have formed the basis of a majority of the criticisms put forward. Sections 2.10.1 – 2.10.11 will illustrate how some of these news value judgements have generated a variety of criticisms in the context of S&E coverage. From the perspective of the news media, objectivity and balance are seen as essential for news reporting. Nelkin (1987: 93) noted that since its conception in the 1830s the norm of journalistic objectivity was “reinforced throughout the nineteenth century as a means to avoid factionalism, encourage the values of pluralism,” and to advance democracy through equitable public access to facts. Tuchman (1972: 660) suggested that objectivity “may be seen as a strategic ritual protecting newspapermen from the risks of their trade.” Since newsmen are essentially responsible for compiling and preparing the ‘facts’ that form news articles, they face the risk of being held accountable for the accuracy of the depicted ‘facts’ (*ibid.*). To cope with such pressure, media organisations emphasise the necessity for ‘objectivity’ in news reporting based on the assumption that “if every reporter gathers and structures ‘facts’ in a detached, unbiased, impersonal manner, deadlines will be met and libel suits avoided” (*ibid.*: 664). However, the norms of objectivity and balance, as we will see in Section 2.10.12, have been the topic of much debate and have generated a substantial amount of criticism in the area of S&E news coverage.

2.10.1 A lack of quantity in coverage

Coverage of the environment and sustainability has been regarded as minimal both in broadcast and print media relative to the extent of existing problems, and relative to other types of news.

In a content analysis of mass circulation magazines in the U.S. between 1971 and 1975, Bowman and Hanaford (1977) found that coverage of environmental issues such as air quality, water quality, and pesticides use, were minimal despite them being significant issues of that period. In another US-based survey, Althoff *et al.* (1973: 669) observed that although media managers personally believed the environmental crisis to be real, they regarded it to be relatively less newsworthy compared to politics, education, economy and crime; therefore the environment as a topic was given the least coverage. Likewise, US-based environment journalist, Alexander (2002: 45) observed that news reports on the environment in the U.S. media were “scattered, sporadic and buried” and tended to be “overshadowed by media obsessions with” sensational stories on celebrities. Alexander also commented that following September 11²⁶ the media tended to focus on issues such as “the war on terrorism, homeland security, and possible war with Iraq” (*ibid*: 45). Similarly, Bocking (2002) commented on how media attention given to environmental initiatives in the U.S. and Canada declined following changes in political focus after September 11.

In Uzbekistan, Freedman (2004: 153) observed that despite the abundance of environmental problems of both national and international significance, “the country’s print and broadcast media [did] little in-depth or analytical reporting on environmental issues”. Based on a content study of the Nigerian news media Agbola *et al.* (1999) reported that the media gave little coverage to environmental issues compared to other matters such as economy, development, politics, health and education. In another Nigerian-based study, Atinmo and Jimba (1998) observed that although the number of environmental articles increased in four national newspapers between 1986 and 1993, the proportion of coverage was minimal compared to articles concerning socioeconomic matters. In a similar way, Spellerberg *et al.* (2006) reported a lack of environmental issues in the contents of television media in New Zealand. In instances where the media provided repeated coverage, as was the case in Germany in the 1980s, according to Krönig (2002) it was followed by a subsequent decline in coverage. In explaining the reasons for the decline Krönig wrote: “A number of journalists found it just boring to swim with the tide and repeat the frequently advanced warnings; they started writing articles which played down if not ridiculed global ecological concerns. Some of them did so purely to be controversial” (*ibid*: 6).

In the U.S., Shanahan (1996), and Shanahan and McComas (1997) found a lack of environmental messages in the content of entertainment television programmes. In another content analysis of non-news entertainment and fictional programmes in the U.S. between 1991 and 1997, McComas *et al.* (2001) affirmed that environmental issues have neither been nor are they becoming a frequent source material for television’s narratives.

²⁶ “September 11” and “9/11” are commonly used terms in references to the attacks on the United State’s World Trade Center and The Pentagon on the 11th of September 2001. See: www.september11news.com.

More recently, accounts of media coverage of sustainability issues (Parker 2003b; Smith 2000b; Voisey and Church 2000) have maintained the same criticism of lack in media coverage. BBC's environmental journalist, Roger Harrabin regarded sustainable development to be still at an "undiscovered" story stage (Harrabin 2000). In a similar manner, Jim Detjen, director of the Knight Center for Environmental Journalism at Michigan State University, categorised 'sustainable development' as one of many unreported stories in the United States (Detjen 2002). He drew attention to a survey conducted by Michigan State University which found that media reports on sustainable development were minimal.

The lack of coverage of environmental matters in the media has often been associated with the public's lack of understanding and awareness. This may be associated with the "quantity of coverage theory" that Mazur and Lee (1993) discussed. This "theory implies that we may account for the rise to public concern of global environmental issues by telling how these issues attained high coverage in the news media" (*ibid*: 683). This means that "as the quantity of stories increases, so do public opposition and concern; as the quantity declines, so do audience worries" (*ibid*: 683). Moss (2003) commented that the reason why most Americans were unsure about climate change and other important environmental issues was unbalanced media coverage of the issues. Observing the lack of media coverage following Rachel Carson's *Silent Spring* in 1962, Grossman and Filemyr (1996: 174) commented: "...the decades of silence by major media on the environment and the sometimes inadequate media handling of environmental subjects today have been factors in discouraging environmental understanding." Wollstein (1998) remarked that despite the significance of environmental treaties such as the *World Heritage Treaty* and the *Biodiversity Treaty* to the lives of Americans, these treaties have been largely ignored by mainstream press. As a result the American public were generally unaware of the existence of such treaties (*ibid*.). Since the public are dependent on the media for information about environmental issues some (e.g. Agbola *et al.* 1999; Althoff *et al.* 1973; Freedman 2004) have suggested that the media are not fulfilling their responsibility to the public.

Although the lack of coverage of S&E issues in the media may be attributed to many aspects of news value judgement, Galtung and Ruge's (1965) first news value determinant – frequency – stands out as a highly likely cause. In Galtung and Ruge's definition, the frequency of an event refers "to the time-span needed for the event to unfold itself and acquire meaning" (*ibid*: 66). The news production process of a media organisation is typically limited to a twenty-four hour cycle (Anderson 1997). Therefore, "the more similar the frequency of the event is to the frequency of the news medium, the more probable that it will be recorded as news by that news medium" (Galtung and Ruge 1965: 66). S&E issues, however, develop over months or years, and as a result do not fit within this twenty-four hour frequency. "So unless a gradually developing environmental problem

is perceived to have come to a climax, it will often tend to be neglected in favour of the more immediate story” (Anderson 1997: 118).

2.10.2 Cyclical and inconsistent coverage

When the media do provide coverage on certain issues, it has been noted to be somewhat cyclical and inconsistent. Downs (1972) proposed that there was an ‘issue-attention cycle’ in media coverage of environmental issues and suggested that there were typically five phases in public and media issue-attention given to environmental issues: (1) a pre-problem phase where an issue has not yet gained public attention, although it may be perceived as important by some experts or interest groups; (2) a sudden awareness phase and an enthusiastic confidence about a possible solution; (3) a realisation phase of the high costs involved, and awareness that the cause of the problem is in fact one that is presently benefiting society; (4) a gradual decrease in interest phase that may result from a feeling of discouragement or suppressed attention out of fear or boredom; and, (5) a post-problem phase where there is prolonged oblivion with the possibility of some off-and-on attention.

In a decade-long empirical content analysis of U.S. newspaper coverage of climate change, Trumbo (1996) observed the first three of the five phases of issue attention that Downs (1972) had proposed. Further evidencing such cyclical coverage, a content analysis of climate change news in *The New York Times* and *The Washington Post* from 1980 to 1995 by McComas and Shanahan (1999) found a period of increased coverage which focused on the dangers and effects of global warming; followed by a continuation phase that focused on scientific debates and the economic entailments of dealing with the problem; and, finally a drop in attention. In their analysis of British press coverage of global warming, Lacey and Longman (1993) observed that although coverage peaked between the years 1989 and 1990, it soon dwindled away by the spring of 1991. They noted that such trends were a cause of concern since it meant that despite increases in the seriousness of the problem and no indication of decreases in public concern, the press ‘gatekeepers’ decided that the issue was no longer newsworthy. Gaber (2000: 115) commented that “there is no doubting that the media’s interest in the environment is cyclical.” Despite the nature of environmental deterioration which is often an ongoing process, Gaber noted that media interest in environmental issues “demonstrated dramatic shifts – moments of significant intensity, followed by, perhaps, years of drift, and then, perhaps another surge of interest” (*ibid*: 116). This attention pattern, however, is a poor indicator of the actual state of the environment (*ibid.*). In reasoning the cyclical coverage, Gaber suggested that coverage may be determined by the activities of environmental groups and scientists who are often key information sources; political power over the media agenda; or public attention being diverted to other interests such as financial security in the face of recession.

In addition to Gaber's reasoning, the media's lack of consistency in attention given to a particular environmental issue may also be explained employing Galtung and Ruge's (1965: 67) seventh hypothesis which was

the idea that once something has hit the headlines and been defined as 'news', then it will continue to be defined as news for some time even if the amplitude is drastically reduced. The channel has been opened and stays partly open to justify its being opened in the first place, partly because of inertia in the system and partly because what was unexpected has now also become familiar.

However, as Downs (1972) suggested, the attention may then shift to other new issues. Moreover, issues often need to be "new" to make the news. As Harrabin (2000: 61) indicated, the troubling "paradox is that the longer some problems persist [as environmental problems often do], the less they hold the attention of the media." Once a long-term potentially catastrophic consequence of environmental change has been reported, it becomes "an old story"; it may be an issue of monumental importance, but unlike "the latest cricket score", people have already "heard it before" (*ibid*: 50).

2.10.3 Sensationalism

Sensationalising of news appears to be another frequently occurring criticism of media coverage of environmental issues, considering its effects on public knowledge and perception. This tendency has led to a general critique of the mainstream media's preferences for what has come to be termed as 'infotainment' (SustainAbility, Ketchum and UNEP 2002).

One area of sensationalism concerns the media's focus on disasters, catastrophes, crisis and tragedies when covering environmental news. Allan *et al.* (2000) referred to numerous accounts that reaffirm media preference for spectacular and sensational environmental disasters. For instance, news on natural disasters such as earthquakes, hurricanes, drought or flood, are prioritised over regular environmental hazards such as agrochemicals use, asbestos exposure or lead in fuel (*ibid.*). Frome (1996: 219) commented:

It's tragic that continued degradation of the environment gets such short shrift from the mass media. It takes a catastrophe, like Chernobyl, Bhopal, or the Exxon oil spill in Alaska, to make the nightly news, and then it is reported as a "story," with scant attention to fundamental cause or broad effect.

In her study of U.S. network coverage of Chernobyl, Gorney (1992) observed that the reports did contain aspects of sensationalism. Analysing the quantity and content of U.S. newspaper coverage of Amazon forest issues, Bendix and Liebler (1991) affirmed that coverage was "mainly a response to crises and bad news." In New Zealand, Dew (2001) found a common concern among scientists was the media's tendency towards sensationalism and the portrayal of the most extreme state of affairs in their coverage of earthquake issues. In their study of news networks' coverage of environmental risk, Greenberg *et al.* (1989a) found that ABC, CBS, and NBC employed dramatic

visual appeals in their coverage. They commented that the focus on catastrophes distorts the public's conception of risk as it leads to an overestimation of health risks resulting from acute events and an underestimation of risks resulting from chronic risk issues. In addition, Shanahan and McComas (1997) suggested that the media's focus on the dramatic value of a story may mean that highly risky issues may go ignored, if they do not entail dramatic characteristics. Smyth (1990) cautioned that simply providing information about crisis rather than enhancing public knowledge and understanding about it, may only lead to a rise in people's tolerance levels towards crises.

Davis and McLeod (2003), by contrast, have provided an interesting evolutionary perspective of media sensationalism. They argued that contravening the unworthiness of sensationalised news as proposed by media critics is the high level of appeal of such news has to humans – its value demonstrated by the number of people who are willing to pay for sensational news. They reasoned that people were interested in sensational news concerning other people because “from an evolutionary point of view, the emotional impact of these stories makes sense” (*ibid*: 214). They explained:

Our ancestors would likely have increased their reproductive success by gaining certain kinds of information about the world around them. Thus, stories about animal attacks, deadly parasites and tainted food sources remain salient topics, even millions of years after their likelihood of occurrence has become marginal in industrialised nations (*ibid*: 214).

Therefore, in the present era sensationalised “news stories may appeal to humans because they trigger an evolved tendency to attend to information that could have increased a human's reproductive fitness” (*ibid*: 215).

For the media, catastrophic and crisis-centred events provide essential news values. A focus on such events may be associated with Galtung and Ruge's (1965) second hypothesis on news values which they termed, “amplitude”. Amplitude refers to “the degree of amplification (or issue threshold) that an event has to reach before being viewed as newsworthy”; for instance, the number of deaths resulting from a natural disaster or the scale of an oil spill (Anderson 1997: 118). Such a focus may also be associated with the fact that they are “unexpected” – Galtung and Ruge's (1965) sixth news determinant. “Events have to be unexpected or rare, or preferably both, to become good news” (*ibid*: 67). Catastrophe, disasters and crisis also contain the news value of negativity – Galtung and Ruge's twelfth hypothesis: “The more negative the event in its consequences, the more probable that it will become a news item” (*ibid*: 68). Sandman (1974) observes that while the sensational element of a particular story in itself adds to its news value, the convenience and objectivity that such news entails are also important factors for the news media. He exemplified the convenience of covering the event of a death resulting from pesticide poisoning compared to investigating cumulative pesticides effects; and, since the story on death cannot be accused of being manufactured, objectivity is ascertained.

Another form of sensationalism identified in environmental news stories is the focus on conflicts and controversies. Harrabin (2000: 56) used the term “bi-polar conflict” to describe this tendency, to emphasise that it is usually a two-sided debate. Anderson (1997: 7) maintains that “environmental reporting tends to thrive on dramatic ‘events’ involving ‘goodies’ and ‘baddies’.” This is because, as Miller (2002) notices, conflict is itself a principal determinant of newsworthiness.

The media’s focus on the conflict and controversies of S&E issues, however, has found itself to be the subject for another array of criticisms because of its consequences on public understanding and views. Evidencing this tendency, Barton’s (1988) analysis of American television news coverage of acid rain found the focus to be on conflict and drama, at the expense of essential information. Anderson (2002: 7) maintains that the news format preference for “confrontational dialogue” between experts does not contribute to public understanding of issues, and offers “the public little means of evaluating opposing viewpoints”. Moreover, Harrabin (2000: 56) noted that two extreme bi-polar positions may not be an accurate portrayal of the actual debate since most debates “have the majority of people grouped slightly to one side of a central position.” Voisey and Church (2000: 200) maintained that the adversarial approach to news reporting becomes problematic in the coverage of sustainability issues that entail consensus if journalists deliberately “look for conflict and discord rather than the first small steps towards cooperative working.” Gee (2000: 212) pointed out that a consequence of the media’s reliance on controversy to continually attract audiences “is that once there is basic agreement on an issue...the media loses interest...This gives us the paradox...of an issue becoming simultaneously more important, yet less newsworthy.”

This form of sensationalism has also been a cause for concern because too much focus on conflict and controversy could mean lesser space devoted to context. In their content analysis of U.S newspaper coverage of environmental news, Randazzo and Greer (2003: 123) observed “that when conflict was a dominant theme in the article,” less “contextual information that could give readers a deeper understanding of the issue” was provided. In a discourse analysis of environmental issues in the Italian press, Triandafyllidou (1996: 385) observed that emphasis was on the conflict between political personalities rather than on the details and consequences of the environmental problem in question, or its urgency. Pawa and Krass (2006: 507) noted that in media coverage of the issue of global warning, “when the focus is on who is gaining the upper hand in attacking whom in the world of climate science”, essential scientific information becomes obscured.

The media, on the other hand, find conflict and controversies to be highly newsworthy aspects of environmental stories. Conflicts (usually between two parties) provide the media with the essential element of ‘balance’ in news reports. Since conflict usually involves people it may be associated with the news value of ‘personification’ – Galtung and Ruge’s (1965) eleventh hypothesis.

According to this hypothesis events that “can be seen in personal terms, as due to the action of specific individuals” have higher news value (*ibid*: 68). In addition, conflict also entails the news value of ‘negativity’ – Galtung and Ruge’s twelfth news value determinant.

In short, what many have perceived to be sensationalised news, in fact, contains a variety of newsworthy values for the media. Friedman (1983) observes that the media’s inclination for reporting conflicts and crisis is based on the perception that such coverage sells and that it is what people want to hear. Likewise, Dunwoody (1999: 70) noted that editors often “encourage journalists to recognize and highlight controversy” as their long experiences in journalism “has made it clear that audiences pay attention to controversy.” Therefore, as Friedman (1983: 28) notes, in spite of “complaints and unflattering analyses on the pages of both scientific journals and journalism reviews, many media outlets persist in this approach” of sensationalising environmental news.

If sensational news is seen from an evolutionary perspective as Davis and McLeod have suggested, then this may mean that sensationalism in environmental news may very well be more of an advantage, rather than a disadvantage, in mobilising public action. Sensationalism would be particularly relevant to environmental issues that directly relate to human reproductive fitness; for example, the effects of industrial chemicals on the endocrine system. In addition, Gee (2000: 220) argued that “it would be wrong to conclude that the media’s interest in controversy prevents progress in dealing with environmental issues. Both controversy and consensus have their part to play in raising then resolving environmental problems.” Dunwoody (1999: 70) noted that audiences do “pay attention to controversy” and “researchers have established that conflict can serve as a powerful catalyst for learning.” Moreover, Miller (2002) observed that in an era of ‘infotainment’ and decreasing attention spans, the news media, by necessity, needs to engage their audiences on much more than just at an intellectual level.

While this is not the place to raise such a debate, it is enough to say that criticisms of the media’s tendency to sensationalise environmental stories may be regarded as a paradox in environmental communication, considering that the objective of sensationalism is to attract audience attention. News presented in an unsensational manner may not arouse public interest or curiosity, let alone elicit an emotional reaction in the reader.

2.10.4 Exaggeration and inaccuracies

Sensationalism may have also led to exaggerations, inaccuracies, and alarmism in environmental news. In order “to make a splash,” journalists may tend “to overemphasize the seriousness of risks or disasters” particularly when breaking a new story (United Nations 2004: 142). Galtung and Ruge (1965: 86) suggested that “the more dramatic the news, the more is needed to add to the drama.

This may lead to...distortions. The more drama there already is, the more will the news media have to exaggerate to capture new interest”.

In a study of the accuracy climate change news coverage in New Zealand print and broadcast media, Bell (1994) found several cases of exaggeration and misinterpretation. In a content analysis of news media coverage of the chemical Alar used on Apples, Smith (1998: 36) noted that a *60 Minutes* report had included untrue statements about risk, and that it had “lived up to its reputation for sensationalism.” Referring to examples such as a lack of references to scientific evidence, misrepresentations of scientific assessments, omissions, exaggeration, misstatements of scientific facts, undue generalisations, and other factors that limit the accuracy of media reports on environmental risk, Wildavsky (1995) advised that media audiences would need to be wary when making judgments about the environmental risk at hand. In Germany, Krönig (2002) noted how the widespread of ‘alarmism’ contributed to a decline in environmental journalism. A constant array of alarming articles and reports on “doom and gloom, [and] the prophecies about impending ecological disasters...in the long run undermined the position of the Green movement and the credibility of environmental journalism” (*ibid*: 7).

However, sensationalism to the point of exaggeration and distortion may be an exception rather than the norm. For instance Smith (1998) observed that newspaper and television coverage of Alar, following the sensationalised *60 Minutes* report, did not contain an equivalent amount of exaggeration or inaccuracy to deserve the label of irresponsible journalism. Likewise, through a content analysis of thirteen U.S. newspapers, Friedman *et al.* (1996: 1) found “little to support the degree of criticism applied by many people to media coverage of Alar.” Furthermore, in a survey of U.S. environment reporters, Sachsman *et al.* (2006: 117) found that a majority “disagreed with the statement that environmental journalists generally have overblown environmental risks, unduly alarming the public.”

2.10.5 A focus on events

Another commonly held view among critics is that the media’s event-driven tendency is a problematic factor in environmental news coverage. One identified problem was that there will not be coverage unless there is an event. For instance, in relation to the coverage of an environmental issue in the Japanese media, Ohkura (2003: 242) noted that the views of environmental groups were that the press were highly “event-dependent and that they would not initiate reporting unless either residents’ groups or government authorities took some actions.” Valenti and Cragg (2003) reported that U.S. media coverage of sustainability was minimal and mainly generated by major global events – the 1992 Earth Summit in Rio being the event-driven peak of reporting.

Another identified problem is that S&E issues often do not meet the criteria of being an ‘event’, and as a result do not receive coverage. In their review, Allan *et al.* (2000) noted that studies on environmental reporting have shown that certain environmental issues do not receive wide media coverage even when they pose serious long-term threats partly due to their non-event qualities. Howson and Cleasby (1996: 157) commented that as long as television remains “fixated with events...the processes of sustainability will not feature in the news agenda.” Likewise, BBC environment reporter, Roger Harrabin commented that since news often examines only short-term consequence of issues this inevitably poses a barrier to the reporting of the long-term issue of sustainable development (Harrabin 2000). Furthermore, he observed that environmental reporters sometimes “go to considerable lengths to overcome this obstacle by disguising reports of long-term environmental change as news events” (*ibid*: 51). However, this review suggests that such attempts may have only contributed to further criticisms concerning the media’s event-driven tendency.

A third identified problem associated with the media’s event-driven tendency is its consequences on public awareness, understanding and opinions about related issues or the lack thereof. For instance, a report by the United Nations (2004: 143) stated: “When events are reported in isolation, the public receives disconnected and discontinuous messages about bits of the environment – the opposite of ecological thinking.” Hannigan (1995: 65) commented that when the media focuses on “discrete events rather than on the contexts in which they occur, the media tend to give news consumers the impression that individuals or errant corporations rather than institutional politics and social developments are responsible for these events.” In their analysis of the coverage of slow-onset environmental risks such as acid rain, ozone depletion and the greenhouse effect, in five U.S. newspapers, Wilkins and Patterson (1990: 21) observed that since the stories were often framed as events, they seldom provided diagnostic information and seldom associated the hazards with causal factors like individual lifestyles; consequently, individuals may “never be encouraged to take personal steps in mitigation”. Musukuma (2002: 16) reported that a study by the Environment Council of Zambia found that most environmental stories were coverage of “functions and activities such as workshops, tree planting days and launching of projects” by environmental institutions and the Government, and often “the guest officiating at the functions made the story instead of the issue raised in their speeches.” Musukuma hence concluded that the media in Zambia played a limited role in raising environmental awareness. In the case of risk associated with nuclear power technology in North America, Allan *et al.* (2000) noted that the focus on events had consequently led to journalists’ failure to report on the bureaucracy and decisions that had led to the problem, on long-term risks to the public, and on alternative technologies; because of this, they failed to provide the public with a clear understanding of the issue.

From the perspective of the news media, environmental reporting raises the question of how a reporter is to cover “something that fails to happen or something that has always happened?”

(Goodell and Sandman 1973: 50). Reporters are unlikely to investigate and expose issues since that would call for “covering a non-event, newsmaking instead of news reporting” (*ibid*: 49). In addition, events, unlike issues, fit better in the twenty-four hour news production cycles of most media organisations, i.e. the news media’s ‘frequency’ as proposed by Galtung and Ruge (1965). Furthermore, since events often involve people, it also provides the news value of ‘personification’ – Galtung and Ruge’s eleventh news value.

2.10.6 An inability to handle scientific uncertainty and complexity

Closely connected with the media’s preference for events is their lack of interest in uncertain and overly complex issues. As Harrabin (2000: 50) commented, it is very “difficult to engage the newsmachine with discussion of consequences that may or may not result in 50 years’ time”, which is the case with many S&E issues. According to Galtung and Ruge’s (1965: 66) third hypothesis “an event with a clear interpretation, free from ambiguities in its meaning, is preferred to the highly ambiguous event from which many and inconsistent implications” could be made (*ibid*: 66). Environmental information, conversely, often contains an element of uncertainty (Friedman 1983) and some aspects are yet to be fully understood. For instance, on the issue of biological diversity, species loss and its consequences are not easy to chronicle (Hamilton 1991). The fact remains that scientists neither know the actual numbers of animal and plant species that exist, nor the precise rate of extinction (*ibid.*). In addition, species values such as their medicinal properties, remains a potential (*ibid.*). It is a norm in the scientific process to regard “scientific evidence and knowledge” as “tentative and uncertain” (Friedman 1983: 24). Research and debate over environmental dangers resulting from long-term exposure to materials such as asbestos serve as an example (Gee 2000). Uncertainty is also common in other long-term “hazards, such as acid rain, ozone-layer damage, global warming and nitrates or pesticides in groundwater” (*ibid*: 213). This causes two problems: one, the lack of immediate damaging effects gives a false sense of security, and two, when convincing evidence of damaging effects become apparent, it may be the case that too much is already accumulated, rendering the damage irreversible (*ibid.*). As Maloney and Slovonsky (1971: 78) put it, although “doubts still exist as to the extent of the illness of the environment, definitive proof might not be available until the autopsy.”

All the same, uncertainty and complexity continues to be difficult aspects for a journalist to cover. Anderson (1997) suggested that the news value of unambiguousness may be the reason why environmental reporting sometimes decreases when the complexity of the issues increases. When “complex, slow-onset environmental problems are being covered”, Yang (2004: 99) observed that there was a tendency among journalists to present these “in a monocausal frame that fails to encompass the multifacetedness and interconnectedness of the environmental problems.” One problem arising from this simplification process that Anderson (2002: 7) has noticed is “that by simplifying complex scientific information one inevitably distorts it.”

2.10.7 A lack of international / local aspects

The scope of environmental news coverage has also been the subject of scrutiny. While some have noted a lack in coverage of local environmental issues, others observe a lack of international aspects.

Following a content analysis of Estonian and Latvian newspapers, Gooch (1995) reported findings that showed media tendency to focus on locally relevant environmental issues and regarded the selection of issues to be geographically biased. Detjen (2002) reasoned that population as an issue tended to be ignored in environmental news reporting in the U.S. media because it was perceived to be an international topic; the media there tended to focus instead on local issues. In providing an over view of environmental news coverage over a period of three decades following the late 1960s, Canadian environment writer Michael Keating pointed out that since “most media are local in scope, nearby problems dominate their coverage” (Keating 1997: 12). The focus on local aspects may be attributed to Galtung and Ruge’s (1965) fourth news value hypothesis – meaningfulness – which concerns its ‘cultural proximity’ and ‘relevance’ to the reader or listener. This explains the news media tendency to focus on local issues that people are familiar with or foreign events that are perceived to have local relevance (Anderson 1997). In their review, Howson and Cleasby (1996) reported that audience research in the U.K. have found that internationally oriented topics attracted lesser viewers compared to local programmes. Such audience preferences and the high costs of international programmes further justify the media’s focus on local issues (*ibid.*).

Others, in contrast, have observed that the press tend to cover international or national aspects at the expense of more relevant localised issues. Mbuya (1992: 138) commented that because the media in Botswana were underdeveloped, there was a tendency to “resort to foreign sources of information which have little or no relevance” to local situations or to the immediate needs of the public. Friedman and Friedman (1989) observed that environmental news coverage in Asian countries tended to focus on international and national information. This, they say, creates a problem, especially if it is the only information audiences see, as it leaves them believing that the issues are remote and of little relevance to them. Friedman (1983) noted a similar trend of international or national focus in environmental news reporting in the United States. She said that such reporting “takes pressure off local environmental decisionmakers who aren’t kept on their toes by the media” (*ibid.*: 26).

2.10.8 Questionable media judgements of newsworthiness

Journalistic judgments of newsworthiness when covering S&E issues have also been a subject of much criticism. Anderson (2002: 9) describes that characteristically journalists “operate with a

number of unquestioned news values; a sort of ‘sixthsense’ about what is perceived as appealing to the public”. However, some observations have indicated that journalistic judgement of newsworthiness of S&E issues may not necessarily be in concurrence with the judgements of experts or members of the public. Harrabin (2000) reported that a quiz on news values that compared how BBC journalists and external experts assessed newsworthiness of issues pertaining to the environment revealed that there was a broad difference between the two groups. He observed that in contrast to sustainability experts, journalists regarded forest fire in Indonesia to be more newsworthy than the one in Brazil. Although the Brazilian fire involved a larger area of forest loss (therefore entailing a larger impact on global climate and biodiversity), journalists perceived it to be less newsworthy, since it was confined to one state and was not something new. Harrabin asserted that the disparity between how journalists and experts judge the significance of news, raises the question if the media have got their “balance” right. He further asserted that journalists’ decisions on what is newsworthy about sustainable development is of extreme importance, as these decisions, if made inaccurately, can distort the true picture of environmental problems and may disadvantageously impact policy by influencing public opinion.

Valenti and Crage (2003) drew attention to research reports that have questioned editors’ capability to make judgements about what the public perceives to be important. Based on his content analysis of newspapers in Estonia and Latvia, Gooch (1995) found differences between journalistic and public judgement about the significance of some environmental issues (*ibid.*). For instance, air pollution was not given extensive coverage, despite the fact that it was regarded as the most severe of environmental problems by both the public and governments of the countries. In their review of previous studies on media coverage of environmental risk, Dunwoody and Peters (1992: 211) remarked that although journalists often claim “an allegiance to audience wants and needs” many studies have found “that journalists and their editors maintain a flawed image of their audience.” This is because reporters have limited interactive contact with their general audiences and rarely have representative background information about audiences. Instead, reporters rely on their interactions with a few individuals and the occasional feedback from readers or viewers (*ibid.*). This flawed image that media representatives have of audiences does have an influence “on news decisions and may have a major impact on a journalist’s judgment about what information to include and what to leave out of a risk story” (*ibid.*: 211).

2.10.9 A lack of appropriate and diverse information sources

Critics have also focused on the information sources that journalists use in environmental reporting. Noting the use of sources in Japanese newspaper coverage of environmental issues, Ohkura (2003: 243) concluded that the media were not fulfilling their role as watchdogs in the public interest, since they did “not pursue their journalistic function of reporting news on the basis of their own investigations” but instead simply took “the flow of information from government and industry”.

Freedman (2004) commented that media coverage of environmental issues in Uzbekistan lacked balance in the sense that views presented were predominantly those of its authoritarian government. Corbett's (1995) content analysis of newspaper coverage of wildlife issues in the U.S. found that state wildlife officials were the most frequently cited news sources and that coverage lacked alternative or counterpoint views. She cautioned that this trend may concentrate the power of representing wildlife interest and its associated problem definitions within the hands of the government. Anderson (2002: 8) suggested that media tendency to portray the authoritativeness of particular "expert voices" as if they were self-evident, while portraying competing views "as non-credible, irrational and partisan" can discourage "critical thinking and the brushing aside of lay views."

From the standpoint of the media, however, the contentions nature of environmental issues renders source selection a difficult task. As Sandman (1974: 224) humorously noted, "sometimes the only available sources are a tight-lipped corporate official and a slightly hysterical activist – each with a serious credibility problem." Dennis (1991: 62) commented:

A special problem is the anti-business stance of much of the environmental movement, whether real or a matter of appearances. As business and environmental interests are increasingly pitted against each other, this natural contentiousness makes reporters and editors leery about whom to use as a source of reliable news and information.

Moreover, as Anderson (2002: 7) pointed out, media personnel often face "great problems in interpreting and explaining...competing claims" because relatively few have the relevant scientific backgrounds to do this proficiently. Deriving from interviews with environmental journalists in America, Yang (2004: 103) noted that "journalists' lack of scientific knowledge and training...often leads them to contact government agencies or their public relations personnel" as they are perceived to be the most knowledgeable sources.

Furthermore, the sources that media rely on for information about S&E issues may be dependent on the size of the media organisation and consequently their available resources. In their survey of editors, Maloney and Slovonsky (1971) found that smaller newspapers tended to rely on wire services as a major news source, while larger papers ranked government agencies and other sources such as civic groups and universities ahead of wire services.

2.10.10 A lack of depth in coverage

On a positive note, in their analysis of how five North American newspapers covered the issue of acid deposit, Kauffeld and Fortner (1987) found that the papers did provide adequate coverage of the issue, and had even suggested solutions to the problem. They concluded that such coverage could help enhance public understanding, and lead to responsive commitment and action. However, the majority of studies and commentaries on media's coverage of S&E issue appear to be

consistent in noting their lack of depth – that coverage informs but does not educate, that coverage lacks context, and that coverage lacks ‘empowering’ or essential information.

Environmental problems often entail long-term processes and cumulative effects. However, some have observed a lack of these aspects in news reports. For instance, in terms of media coverage of environmental issues associated with agriculture in the U.S., Jackson (1991: 146) commented that although “the media have informed the consuming public about immediate threats to their health” they neglected “to examine and explain the long-term ability of the land to produce food” despite it being a crucial factor for the well-being of future generations. Alexander (2002: 45) commented that although most newspapers and newsmagazines do cover environmental problems, “stories examining the interaction and cumulative effect of these problems are not being brought to public attention in any big or consistent way.” He observed that even when reporting climate change, a problem that can adversely impact on billions, journalists tend to focus only on current happenings, and do not pay much attention to potential impacts of present human behaviour on the future (*ibid.*).

Sustainability often entails long-term objectives and multidimensional factors; however, some have noticed that these aspects are not evident in news coverage. Harrabin (2000: 53) pointed out that although the concept of sustainability cuts across a variety of sectors, this multidimensional aspect of sustainability is often not reflected in news coverage. A majority of journalists whom Voisey and Church (2000) interviewed were aware that sustainable development encompassed much more than the environment, but this knowledge was rarely reflected in their reporting. In the same way, Keating (1994: 12) pointed out that most news reports on sustainable development dealt with its environmental aspect but rarely analysed its economic and social aspects.

Another aspect of environmental news reporting that has spurred criticism is its failure to place issues within a clear context. “Context, defined as coherent analysis that helps makes complex topics understandable” is crucial to facilitate public learning about the issues (Randazzo and Greer 2003: 120). Bowman and Hanaford (1977: 164) concluded that mass circulation magazines in the U.S. were “not placing relevant environmental news into context” since the stories, “rarely incorporated principles of ecology into their reports, rarely discussed important long-range issues, and rarely suggested how society and individuals can cope with environmental problems.” In a content analysis of environmental news coverage in leading U.S. dailies in 2001, Randazzo and Greer (2003) found that context was evident in only a few articles.

Although in an earlier report Protess *et al.* (1987: 181) suggested that “the simultaneous presentation of problems and their solution” may reduce effects on public attitudes as it creates “the impression that the danger [is]...under control”, conversely, others have stressed that clarification

of underlying causes of problems, and the provision of possible solutions and preventative measures to be essential aspects for mobilising public action. Such aspects were observed to be largely absent in environmental news reports. A report by SustainAbility, Ketchum and UNEP (2002) noted that news coverage of the environment in the OECD region between the period 1961 and 2001 have tended to be centred on incidents of pollution and ecological disasters, instead of the underlying trends and their roots. Detjen (2002) upheld that while environmental journalists reported well on indicators of environmental problems such as water and air pollution, relatively few provided analysis of underlying causes of problems such as population increase or consumerism, or on ways in which such problems might be avoided. Likewise, through a content analysis of environmental news reports in daily newspapers in Pennsylvania, Major and Atwood (2004: 18) found that although the news defined problems readers were “not being provided with adequate information about possible solutions to environmental problems.” In his analysis of media discourse on global warming issues in *Science* and *United Press International*, Williams (2001: 55) found that proposed solutions “made up a very small portion of the overall debate about global warming”. Valenti and Cragge’s (2003) study of international and U.S. media coverage of sustainability found that the reports did not offer empowering information that could motivate readers to take behavioural actions. In her analysis on how air pollution was constructed as an issue in the contents of U.S. newspapers, Kensicki (2004) found that coverage rarely clarified the causes of pollution, its effects, or agents responsible for the problem, and, rarely suggested remedial actions. She suggested that in this way, media content may be encouraging apathy towards environmental issues as a social problem and reducing a sense of personal responsibility (*ibid.*). As in the U.S., Freedman (2004) observed that media coverage of environmental issues in Uzbekistan tended to be superficial and lacked explanation of underlying causes to problems. In the same way, Triandafyllidou’s (1996) discourse analysis of press coverage of environmental issues in Italy found that coverage lacked essential substance, in that the consequences of the problems or their possible solutions were hardly discussed. In a survey of environment reporters in the U.S., Sachsman *et al.* (2006: 117) observed that many reporters themselves agreed that “environmental journalists generally concentrate far too much on problems and pollution rather than writing stories to help readers understand research or complex issues.”

Yet another area of criticism of environmental news has been its lack of depth in terms of its provision of relevant and essential information that can help build public understanding of ecology. In a content analysis of newspaper coverage of wildlife in the U.S., Corbett (1995) found that the articles did not emphasise the importance of species diversity despite it being a significant aspect for public understanding of natural ecosystems. She found the majority of media attention was devoted to game animals rather than endangered or threatened species.

As we have seen above, a lack of depth or oversimplification is seen as an impediment to the enhancement of public knowledge and awareness about S&E matters. On the other hand, however, simplification is almost necessary for the operations of the news media. As Miller (2002: 59) notes, the complex and “inherently interdisciplinary nature of environmental issues does not easily accommodate itself to the space and time limitations of media presentation, nor are audiences prepared to give them the concentration they require, at least not when they are reading the newspaper or watching television.”

2.10.11 Biases in news reports

While most media personnel would claim autonomy and neutrality, others have noticed various biases in media reportage on environmental issues. Criticisms concerning such bias appear to be two-way. While some have noted how environmental stories were framed in favour of industry and economic growth, others observed media biases towards environmental groups and exaggeration of environmental problems.

In a study that compared U.S. press coverage of the greenhouse effect with scientific literature, Nissani (1999) found the coverage to be shallow and pro-corporate biased. Dispensa and Brulle (2003) related the biased perspective of global warming presented in the U.S. media to the influence of the strongly present fossil fuel industry in the country. In their content analysis of media coverage of conflicts associated with the planning of a hazardous waste treatment facility within in a small community in Louisiana, Taylor, Lee and Davie (2000) found that the way local dailies framed stories appeared to be biased towards the industry and government. They reasoned that the biases were due to the fact that local newspapers were dependent on advertising revenue which in turn was dependent on the state of the local economy. Deriving from a qualitative content analysis of five major U.S. newspapers, Lewis (2000) reported that representation of sustainable development did little to show its various dimensions or alternative growth strategies, but, supported instead the status quo, narrowly focusing on the economic growth paradigm that assumes economic growth to be equivalent to development. In addition, Lewis observed that by framing sustainable development as an international issue, the press provides northern agents a way to evade their responsibility for environmental damage that they have contributed to throughout the history of their industrialisation.

Conversely, Breen (1994) referred to previous surveys and other evidence that were indicative of environmental journalists' biases against business and their slipping into advocacy journalism. He referred to a survey by the *Foundation for American Communications* in 1993, in which 36% of five hundred environmental reporters admitted that many journalists were anti-business. Breen also noticed how some journalists practised environmental advocacy in the guise of journalism, and

referred to unbalanced news reports that single out a polluter, giving the polluter very little space to plead their case, while presenting the opinions of environmentalists as facts.

However, in their review of previous research in the USA and Germany on media coverage of environmental risk, Dunwoody and Peters (1992: 223) argued that the conception “of media bias may itself be biased.” They noted:

Recent research posits the existence of a ‘hostile media phenomenon’, a tendency to perceive media coverage as being biased against one’s own viewpoint. A German survey, for example, revealed that proponents of nuclear power perceived a media bias against that technology, while nuclear power opponents felt that media were too favourable to nuclear energy.

2.10.12 The inappropriateness of journalistic objectivity and balance

While objectivity and balance are longstanding journalistic traditions, they have been viewed as somewhat problematic within the context of environmental journalism. Miller (2002: 60) pointed out that according to the objectivity norm, journalists are obliged “to report fully, and without editorial comment, what ‘both sides’ say and think, however responsible or irresponsible – or isolated – a particular spokesperson may be.” Reporting in this way “protects the journalist’s claim to objectivity, [and] provides an element of conflict as well. Thus, even on issues where the weight of scientific opinion seems to be disproportionately on one side, conflicting versions of the truth are afforded virtually equal coverage” (*ibid*: 60).

However, some have observed that when two sides of a debate over an environmental problem are presented as equals, it can misinform news audiences. In Japan, Ohkura (2003: 242) found that in covering an environmentally impinging land reclamation project, newspapers had “feigned impartiality, and...avoided taking a clear stance advocating environment conservation by merely balancing views and opinions from both sides.” Ohkura observed that the media’s “equivocating stance” became particularly problematic when it began to raise doubts about scientific aspects such as the significance of ecosystem’s functions. Ryan (1991: 86) commented that one of the problems with the balance approach is its artificiality, as it becomes “a matter of giving equal airtime or newshole space to dissenting views of questionable merit.” Chris Mooney, senior correspondent for The American Prospect, argued that some news articles on the climate issue can be so “artificially balanced” that it results in an inaccurate and misleading account (Mooney 2004). He referred to this as “a prevalent but lazy form of journalism that makes no attempt to dig beneath competing claims” (*ibid*: 28).

Nelkin (1987: 96) pointed out that journalistic objectivity “is meaningless in the scientific community, where the values of ‘fairness,’ ‘balance,’ or ‘equal time’ are not relevant to the understanding of nature, where standards of objectivity require, not balance, but empirical verification of opposing views.” It is perhaps for this reason that journalistic objectivity became

particularly contentious in the case of news media coverage of global warming. For instance, Boykoff and Boykoff (2004: 126) maintained that “when it comes to coverage of global warming, balanced reporting can actually be a form of informational bias.” They found that despite substantial evidence of anthropogenic causes of climate change provided by the scientific community, a content analysis of U.S. prestige newspapers showed that in the majority of news reports the climate issue was presented in a balanced manner, whereby approximately equal attention was given to “the view that humans were contributing to global warming and to the view that exclusively natural fluctuations could explain the earth’s temperature increase”; this, they suggest, supports “the hypothesis that journalistic balance can...lead to...informational bias” (*ibid*: 129). Quite similar with Boykoff and Boykoff’s observation, Antilla’s (2005: 350) review of U.S. newspaper coverage of climate change found “many examples of journalistic balance that led to bias,” and noted that “some of the news outlets repeatedly used climate sceptics – with known fossil fuel industry ties – as primary definers.” Likewise, Gelbspan (2004: 72-73) commented that for a long time “the press accorded the same weight to the ‘skeptics’ as it did to mainstream scientists...in the name of journalistic balance.” Gelbspan asserted that the while journalistic balance was relevant for stories involving a conflict of opinion, it was unsuited for stories that involve factual information. Gelbspan suggested that in covering climate change, journalists should investigate where the weight of scientific evidence lies and reflect ‘*that* balance’ in their reports.

Another point of criticism of the media’s norm of balance is that, as Michaelis (2001) highlights, balance is not equitably implemented in all reporting areas. Michaelis commented:

News programmes treat sustainability through bipolar interviews because the issues are seen as still subject to debate. This is not true of all parts of the media – for example, motoring correspondents are not tied by the same rules of balance as other journalists and behave more like lobbyists (*ibid*: 42).

Building upon Michaelis’ point, it may be argued that a car review is not balanced because while it highlights the technical and performance features of the car, it does not include information about its environmental impacts. Car reviews are unlikely to provide any balancing information such as the effects of increased private car ownership on fossil fuel consumption, traffic congestion and air pollution. In addition to Michaelis’ example, sports reporting and entertainment news also appear to be exempt from the ‘balance’ rule.

In spite of the above criticisms and concerns, the media are likely to continue to perceive objectivity and balance as necessary for their profession. In an earlier study in the U.S., Goodell and Sandman (1973: 52) reported that all newsmen in their survey “were unanimous in their endorsement of objectivity...as the model of good journalism. Without exception they were proud of their efforts to ‘bend over backwards to be fair’.” Dunwoody and Peters (1992: 210) referred to the journalistic norm of balance as “a surrogate for validity checks.” This, they say, is because it is a difficult task for journalists to make judgements about the validity of truth, especially when

“confronted by sources with competing assertions, with all parties fervently attesting to the truth of their own claims” (*ibid*: 210). Moreover, they observed that even with scientific training, typically journalists have neither the time nor the expertise to perform validity checks themselves to judge the relative merits of competing claims.

In light of the twelve points of criticism above, this research attempted to gain an understanding of the news media’s perspectives by requesting their feedback and responses to some of these criticisms and concerns. For instance, referring to the above identified problems concerning objectivity and balance, and the suggestions for the weight-of-evidence approach to reporting, newspersons in New Zealand were asked to provide their perspectives. They were also asked to indicate if the expectation to strictly adhere to objectivity and balance posed a problem when reporting sustainability issues. Considering the criticism of insufficient quantity of coverage of S&E issues, newspersons were asked to indicate what factors might enhance coverage. Journalists’ judgement of newsworthiness of S&E issues in New Zealand was examined in Chapter 5 of this thesis, where these judgements were then compared to those made by sustainability proponents and advocates. Since source selection was a point of criticism in environmental news reporting, this was addressed in Chapters 3 and 5 of this thesis, where journalists were asked to indicate the sources they frequently used when covering S&E issues. Journalists were also provided with some of the above aspects (identified to be educative and empowering) to find out if they included these in reporting, and to find out their views of their importance.

2.11 Some unjustness in criticisms of media coverage of sustainability and the environment

It is worth mentioning that there appears some unjustness in some of the above criticisms of media coverage of S&E issues. A majority of criticisms and identified problems appear to be related to either journalistic norms (that are required by the very nature of the journalism profession) or the media’s commercialised orientation (which is inevitably essential to the very existence of their establishment). Therefore, to the media, these criticisms are likely to be perceived as somewhat undeserved.

Some have noted a lack of the media’s agenda-setting function in S&E issues – that the media merely play a reactive role to issues. Sandman (1974), however, clarified that the media’s role as agenda setters are weakened because of a prevailing doubt among newspersons about such a role. He explained:

Editors are frightened of their power to determine what people will think about and talk about. To use this power programmatically would be to “make news.” Instead, journalists rely on public demand and implicit formulas for newsworthiness, thus avoiding both the responsibility and the appearance of manufacturing news (*ibid*: 223).

It would appear unfair if journalists or the media organisations they work for are singled out to bear the blame for what many have perceived to be inadequate coverage of S&E issues considering that news reports can only be as good as the information provided by sources. Even though the problems arising from media tendency to focus on events and drama have been correctly pinpointed, environmental groups and those who have aimed to influence the media agenda by staging events are partly to blame for their contribution to this media tendency. For instance Greenpeace officers have become progressively competent in supplying “the media with pre-packaged material that accords with journalists’ taken for granted assumptions about what constitutes ‘news’” (Anderson 1997: 35). Day (2000: 79) exemplified that members of Greenpeace “climbed smokestacks to hang signs that draw attention to air pollution. Tired of bureaucratic delays, another group...wrapped the Toronto City Hall with red tape and had reporters on hand when the first employees came to work.” Such stunts fit “well with the news values of journalists because they were considered novel and dramatic” (Anderson 1997: 39). More peaceable events, Day (2000: 79-80) exemplified, “might include a press conference, a special lecture, a government hearing, the first showing of an important documentary, or a major announcement of a scientific finding.” Hence, it may be argued that while the media have a preference for covering events, environmental groups and other parties as well have played a role in feeding this tendency.

Inadequacies have also been noted in terms of the representation of information sources in environmental news stories. However, in some cases this may in fact be a result of inadequacies of sources themselves. For instance, Bendix and Liebler (1991) attributed the lack of representation of geographers in the coverage of Brazilian rainforest destruction in U.S. newspapers to a lack of academic and scholarly publications on the topic. They pointed out the unjustness of blaming journalists for the lack of representation since journalists tend to seek “sources who have established expertise” (*ibid*: 483). Mbuya (1992) observed that in Botswana, environmental journalist face the problem of access to relevant information. There is a tendency among experts to fend off reporters and a frustrating thing for the media is when the same experts complain about the poor quality of news when it does not measure up to their standards (*ibid*.).

While many have frowned upon the media’s focus on crisis in environmental news reports, Chase (1973: 4) pointed out that ecologists as well rely on crisis oriented messages to “jolt their listeners.” He illustrated his view: “According to the ecologists, population is not merely growing at an excessive rate, but ‘exploding;’ future industrial growth is not merely dangerous or unwise, but borders on ‘extinction’...” (*ibid*: 4). Likening ecologists to anti-Communists, Chase asserted that ecologists “use the same tactics and exploit the same media weaknesses in order to reach a similar goal: the creation and populari[s]ation of a pollution, population or other crisis” (*ibid*: 4). In the case of media handling of the *Brent Spar* incident in Germany, Krönig (2002: 9) noted how Greenpeace contributed to the alarmism in media coverage by “feeding false information about the

toxic content of the *Brent Spar* to journalists.” According to Miller (2002: 60), environmental groups “whatever their honest appraisal of priorities, provide the media with a steady stream of scare stories about possible or prospective catastrophes, and thus keep the environmental pot boiling, as well as build their membership and contribution levels.”

Pressure groups are often well aware of journalistic norms such as objectivity and balance, and the media’s news value criteria, and take advantage of them to push their agendas. For instance, Miller noted that anti-environmental groups as well “exploit the media for their own purposes. They know very well that reporters will present their opposing positions, however well founded, to balance the coverage” (*ibid*: 60).

Journalists’ inability to evaluate scientific uncertainty was another observed inadequacy of the media. In addition, the media have been criticised for exaggerating environmental risks and consequently distorting public perceptions. However, environmentalists often favour such overstatements since it provides publicity for their cause (United Nations 2004). Scientists as well have a tendency to support overstatements “because if a hazard is widely thought to be immediate and serious, research funds are more likely to flow” (*ibid*: 143). In addition, Gee (2000: 212-213) noted that

the increasing dominance of market forces in the funding of scientific research...has encouraged some scientists to leap into print with controversial hypotheses and preliminary findings which may generate funding...but this creates problems for both journalists and the public in evaluating the truth of scientific reports.

In brief, although the media have been the subject of a wide array of critiques, inadequacies in their coverage of S&E issues appear to be a result of a variety of factors. This observation added to the conviction of this research that a constructive approach for this research would be to identify other interrelated factors that can have an effect on the news production process in relation to the three broad approaches to improving media coverage of these issues.

2.12 The many constraints of environmental journalism

While criticisms of media coverage abound, and expectations of journalists are high, there appears to be relatively little appreciation of the complexities of environmental journalism, the problems journalists face, or the constraints within which the media operate. This review found very few scholarly enquiries that have focused on the needs of environmental journalists; some exceptions include, Witt (1974); Rubin and Sachs (1973); Archibald (1999); Detjen *et al.* (2000); Tabakova and Antonov (2002); Yang (2004) and Sachsman *et al.* (2006). Most studies on the media-environment topic, as Section 2.10 shows, have focused on media contents. The following sub-sections will reveal some of the many constraints of environmental journalism and the problems and limitations that environmental journalists endure.

2.12.1 A journalism of complexity, ambiguity, and multidimensionality

Because of the complexities, diversities and the scientific nature of the subjects it entails, little argument is required to assert that environment journalism is not a simple field. As, Patel (2006: 148), a New York-based environmental journalist, put it:

We're expected to know too much. Journalists who specialise in science and the environment have to grasp, communicate and synthesise scientific, political and economic issues. And we have to do it on deadline with accuracy, authority and readability. Sometimes it can be overwhelming.

Friedman (1983) maintains that even reporters with science backgrounds sometimes find it difficult to interpret the technical information about environmental issues (*ibid.*). These technical details are often jargon-laden making it difficult for reporters to distinguish the importance and significance of facts (*ibid.*). The problem of science is made worse when we consider the fact that most scientific information contains elements of uncertainty. Patterson (1979) and Tichenor (1979) had in fact referred to science and environmental reporting as the 'Journalism of Uncertainty.'

Environmental issues are highly complex in nature; more often than not there are more than just two sides to an issue. They are often multifarious, with technical, financial, political and social aspects (Friedman 1983). Therefore, environmental journalism "requires substantial preparation not just in understanding fundamental scientific concepts but also in addressing social, political, and philosophical questions concerning how we live in relation to the natural world" (Grossman and Filemyr 1996: 175). Moreover, as Friedman (1983) maintains, addressing environmental problems require an understanding of their effects on human health and an ability to evaluate entailed costs and benefits. What is more is that environmental problems "don't develop overnight" but "build up over time" (*ibid.*: 25). In addition, Grossman and Filemyr (1996) suggested that environmental reporters would also need to be mindful of cultural differences and sensitivities; for instance, when reporting issues involving indigenous people.

In comparison to environmental problems, sustainability issues are as complex if not more. For instance, there is an expectation for sustainability to be addressed in an all-rounded manner that includes social, cultural, economic, and environmental aspects while keeping in mind risks to future generations. Because of its multidimensional nature, sustainability is often relevant to a variety of news reporting topics (Harrabin 2000; Voisey and Church 2000; Keating 1994). For instance, even a seemingly unrelated area such as entertainment reporting may have relevance to sustainability when entertainment's indirect relation to lifestyles and consumerism is considered. Furthermore, sustainability issues often entail elements of uncertainty, and are often laden with disagreements about causes and solutions; inter-relations between global and local aspects; and, differences between developed and developing countries. Adding to the perplexity of the journalist covering this topic, sustainability still remains a disputed concept with a variety of interpretations

(see Section 2.3). Hence, one problem that journalists are likely to encounter when attempting to define or explain sustainability would be its numerous interpretations. In addition, a journalist would need to consider if the term is used in a ‘non-profit’ context for the purpose of environmental conservation and societal betterment or if it is used for portraying conformity in a ‘for-profit’ context.

In addition, to the complexity of the topics themselves, S&E issues often involve extensive policies and legislation, both at local and international levels. Miller (2002: 59) maintains that “environmental law is a huge and complicated labyrinth of statutes and regulations that is beyond the grasp of the general public and all but the relatively few professionals involved in it.” Therefore, explaining these aspects to the public in news reports would be a daunting task for the journalist (*ibid.*).

While others have noticed how the complexity of environmental issues and lack of consensus among experts make the topic a difficult one to cover, Spellerberg *et al.* (2006: 140), in contrast, have debated that “there is no less complexity and no less disagreement between experts in economics or social issues.” Even so, as will be further detailed in Section 2.12.2 below, it may still be argued that the complexities of S&E issues pose a particularly difficult challenge for journalists, considering that most journalists covering this area do not have the necessary training and educational background. In addition, journalists themselves have indicated that the complexities of environmental journalism were quite unlike other topics. For instance, Bruggers (2002), who has been an environmental reporter in the U.S. for over twenty years, noted the changes he observed in environmental reporting over the years which has made the field one that is ever more complex. He described:

...I find the environment beat more expansive, more complicated, more contentious, and more difficult to manage than it has ever been (*ibid.*: 37).

At the start of the 1990’s, when I was writing about recycling and endangered plants and animals in California, I could not envision that my beat would eventually take in biotechnology and then ultimately bioterrorism and biowarfare. Everything from bioengineered corn to anthrax to West Nile virus is now part of the environment beat (*ibid.*: 38).

In the same way, Harrabin (2000), Keating (1997), Patel (2006) and Rogers (2002), speaking of their experiences as environmental reporters, have noted environmental journalism to be a field that is exceptionally complex. Yang (2004: 96) reported that environmental journalists in the U.S. indicated that the environment was unlike other news topics since “the causes and effects are generally much more difficult to get at and to explain compared to crime, politics, and sports.”

Noting how the “slow rate of environmental change” has been attributed to its lack of coverage in the news media, and how some have suggested “that journalists struggle to find something newsworthy in an area where there is so little change from week to week and month to month”,

Spellerberg *et al.* (2006: 140) argued that such a “temporal aspect [should present] an interesting challenge, not a barrier” to environmental news. While on the one hand, the nature of environmental change may be viewed as an ‘interesting challenge’, as suggested by the preceding authors, on the other hand, it may be argued that the ‘challenge’ still remains an arduous one for journalists. Even environmental communicators, despite having the necessary background knowledge and often firsthand experience, struggle to come up with effective communication messages. For example, Farrow (2000) noted that ‘communication specialists’ within environmental organisations often face the dilemma of framing messages in a way that relates issues to the public. Likewise, Spruill (2000) articulated the many difficulties that a US-based organisation called *SeaWeb* faced in designing communication messages about environmental problems related to marine ecosystems. Some of the obstacles Spruill identified include: the fact that the problems were not readily visible; difficulty in personalising the issues; difficulty in explaining the interrelations between problems; and, difficulty in framing an issue in a way that provides the wider context of the problem. Although these constraints provided by Spruill referred to the marine ecosystem, the nature of most other environmental issues is quite similar. In describing the difficulty environmental communicators’ face in formulating effective environmental messages Day (2000: 79) noted:

[E]nvironmental behavior is often a series of complex actions and opportunities. Is it realistic to expect a short message to make a significant change? Publicly broadcast communications reach the masses, but since the public usually holds a wide variety of beliefs and knowledge about any one environmental topic, it is difficult to reach the right group with relevant information. How can a message be crafted to communicate the right points to the proper audience?

Considering the above points, it is not an unreasonable assertion that because of the nature of the subjects they cover, framing S&E stories in an effective manner (and in a manner that critics have suggested) would be a vastly difficult task for the journalist. In what follows we will see how other factors add to the difficulty of this task.

2.12.2 A lack of specialisation in environmental reporting

Another identified constraint to environmental journalism is the lack of journalists’ specialisation in environmental reporting. Friedman (1983: 26) observed that environmental reporting is often undertaken by general assignment reporters who are frequently moved from topic to topic by their editors, and they “also tend to be young, relatively inexperienced, and have little scientific background.” Too often, Keating (1997: 12-13) says, “experienced environmental reporters are transferred to other posts and their successors take on their job with little or no training. This means the reporter on the job is frequently still learning the complex issues while trying to explain them to the public” (*ibid*: 12-13).

Goodell and Sandman (1973) found that media organisations did not allocate specialist environmental reporters based on the reasoning that the lack of local stories did not justify the need for one or that the issue could be covered by a general assignment reporter. They hence suggested that the “lack of a special reporter may reflect a philosophy about speciali[s]ation [and] not a lack of commitment to ecology” (*ibid*: 39).

The employment of full-time environmental reporters may also be dependent on the size of a media organisation. Maloney and Slovonsky (1971) found that in comparison to smaller newspapers, larger newspapers in the U.S. tended to have reporters who were regularly assigned to the environment beat, sometimes on a full-times basis. Likewise, Friedman and Friedman (1989) observed that in smaller news organisations in the U.S. and in most news organisations in Asia there is often a lack of specialist environmental reporters. Sachsman *et al.* (2006) reported a similar trend – that the engagement of an environmental reporter was dependent on the size of the newspaper’s circulation.

2.12.3 Environmental journalists’ lack of training and education

Because of the very nature of S&E issues, scientific and technical knowledge appears necessary for their reporting. However, the majority of journalists assigned to covering environmental issues do not have such background in training or education. LaMay (1991: 110) noticed that most journalists who cover environmental issues are “generalists whose specialists, if any, are gained through seat-of-the-pants experience rather than formal education”. Educator and media critic, Everett Dennis pointed out that since environmental stories are often “extraordinarily complex” the media “may not be able to cover the territory any other way than superficially” largely because of the lack of training and knowledge among journalists (Dennis 1991: 61). Friedman (1994: 12) observed that even experienced environmental journalists are often “not well trained in science and scientific risk assessment...Even if they are trained in science, they cannot be specialists in” all the required fields to comprehend the multidimensional aspects of environmental issues. Friedman further reported that in a 1993 survey by *American Opinion Research*, seventy-two percent of reporters in the print media indicated “that reporters, in general, lacked the training and background to cover stories on technical and environmental issues” (*ibid*: 14). In a another survey of 506 environmental reporters in newspapers, magazines, newsletters, television and radio stations in the U.S., Detjen *et al.* (2000: 10) found that only forty-five percent had undergone “specific training to cover the environment.” Friedman and Friedman (1989) reported that environmental journalists in Asia lacked not only training in environmental science but also in general journalism skills. In Botswana, Mbuya (1992) observed that journalists who report the environment often lack training, making it difficult for them to write about its technical and complex aspects. Yang (2004) found that not only did environmental journalists in America start work with little background knowledge, but they were also left to learn on their own and to figure out for themselves how to

cover an environmental story with hardly any training or guidance in the newsroom. Therefore, while they hold “a critical role in helping the public understand environmental issues, journalists feel ill-prepared to cover the environment” because of such lack of training (West *et al.* 2003: 37).

Yang (2004) noted that this lack of relevant knowledge and training did have an influence on environmental news production, as it had at times prevented journalists from pursuing complex environmental issues at a deeper level. It also prevented journalists from explaining the intricacies of problems and evaluating the related scientific facts (*ibid.*). Journalists’ lack of expertise, coupled with their lack of time to investigate, means that they are unequipped to make a judgment about the validity of claims made by sources (Dunwoody 1999; Sandman 1974). This in turn, as Sandman (1974) observes, increases journalists’ reliance on sources, and reluctance in pursuing investigative reporting. Instead, as Dunwoody (1999) notes, when faced with sources providing ‘conflicting truth claims’, journalists resort to the two common journalistic strategies to compensate for their inability to determine validity: objectivity and balance. Objectivity and balance, however, as we have seen in Section 2.10.12, have raised much criticism, in particular, when opposing views from sources of low credibility are equally balanced with more credible sources. Therefore, journalists’ lack of expertise inevitably means their lack of ability to evaluate sources and consequently this means that the observed inadequacies in S&E news reports will continue to persist.

Based on the above accounts, it may be argued that to a noteworthy degree, poor environmental news reporting could be associated with journalists’ lack of appropriate training and background knowledge. Conversely, in a study involving a sample of twenty environmental reporters of daily newspapers in the U.S., Archibald (1999: 29) observed that none “believed that lack of training in science or environmental issues was a cause of any problems in writing.” However, it may be the case that the reporters in Archibald’s study were not lacking in background knowledge as they indicated having undergone prior training or self study. Most other journalists, however, may not have had the opportunity to pursue further education formally or through self study. Furthermore, in earlier surveys, environmental journalists have repeatedly indicated training related to environmental reporting as a need for their profession (see for examples Detjen *et al.* 2000; Tabakova and Antonov 2002). Considering the increasing difficulties in reporting complex environmental issues, long-time environmental reporter, James Bruggers emphasised: “Editors need to make sure all reporters who cover environmental topics – even part time – have adequate training to cover environmental topics accurately, with proper context, scientific grounding, and nuance” (Bruggers 2002: 37). Peter Lord, environmental writer for over twenty years, commented:

Advanced training is needed, if only to better prepare us to confront obstacles that make our jobs more difficult today. Environmental advocacy groups and company public relations people barrage us with material. One of my biggest challenges is sorting through this stuff and figuring out which issues to focus on (Lord 2002: 64-65).

In the same way, academics and researchers in the field have highlighted the need for training in this field. For instance, Leal and Borner (2005a) emphasised that training journalists should be a key aspect in any sustainable development communication strategy. Lacy and Coulson (2000) suggested that training and educating journalists could lead to improvements to source use in environmental reporting as they would be better able to identify the varying views concerning complex environmental issues. To achieve an informed and multifaceted debate, Spellerberg *et al.* (2006) suggested the need to enhance the knowledge of broadcasters about the environment, in particular its connection with sustainability.

To some degree, there has been a recent interest in the provision of mid-career training for environmental journalists. Friedman (1994: 14) observed that such education programmes “for environmental journalists designed to deal with some of the problems” in environmental reporting have increased and have consisted mainly of workshops and seminars. Organisations with interest in environmental matters such as the Bellagio Forum for Sustainable Development²⁷, The Panos Institute²⁸, The United Nations Environment Programme²⁹, The Earth Journalism Network³⁰ and the World Wide Fund for Nature³¹ have begun to invest in the training of journalists in sustainable development and environmental issues. In addition, there are other forms of continuing education such as the Environmental Journalism Fellows Programme offered by the National Tropical Botanical Garden in Kauai, Hawaii (Valenti and Tavana 2005). Even so, participation in such training programmes is an exception rather than a norm for most environmental journalists as such programmes are often organised on an ad-hoc basis.

While mid-career training in environmental reporting appears to be rare, the same is also the case with environmental journalism education at the tertiary level. Friedman (1994) observed that although environmental journalism courses have existed since the 1970s, the number of such programmes offered at the undergraduate level has not seen any prominent increase. Still, many educators who responded to Friedman’s survey indicated a belief that “the field of environmental

²⁷ The Bellagio Forum for Sustainable Development, recognising journalists’ needs for additional skills in interpreting and analysing environmental issues had joined forces with Reuters Foundation to organise a series of joint-training programmes for journalists in developing countries. For further details see: bfdserver.enovum.com/en.

²⁸ The Panos Institute had organised a “National Training Seminar for the Improvement of Environmental Journalism and the Strengthening of Basic Journalism Techniques” in Haiti between 8-12 August 1995. The training had included participants from various media institutions and other professionals involved in environmental communication. See www.panosinst.org/regional/training/22.php.

²⁹ The United Nations Environment Programme had organised “a training workshop on Understanding Environment and Sustainability for South Asian Television professionals” between 12-18 October 2003 in Kathmandu, Nepal. See www.roap.unep.org/news/2004/intouch08.PDF.

³⁰ The Earth Journalism Network organises training and other capacity building activities to improve the abilities of journalists in developing countries to cover environmental issues. See www.earthjournalism.org.

³¹ The World Wide Fund for Nature Malaysia, together with the Asia-Pacific Institute for Broadcasting Development had organised a training workshop, titled “Making Green News” for local print and broadcast journalist between 6 and 30 May 2002. See www.wwfmalaysia.org/C&C/activities.

journalism education [was] maturing” and that it was definitely a field that was growing in prominence (*ibid*: 10).

Environmental journalism education may indeed be somewhat increasing in popularity at least in the United States. For instance, the website of the Society for Environmental Journalists³² listed thirty U.S. universities offering environmental journalism programmes. Griffin and Schoenfeld’s (1982) study which investigated 171 U.S. journalism and mass communication undergraduate departments, found that forty-three percent frequently included environmental aspects within the journalism curriculum, while ten percent also included a separate course in environmental reporting. Freedman (2004: 157) noted that environmental journalism courses “are now standard electives in U.S. journalism curricula”.

Elsewhere however, it is likely that environmental journalism has remained less prominent within the journalism curriculum. In Uzbekistan, for example, Freedman (2004: 155) observes one of the reasons for the scarcity of good quality environmental reporting to be “the failure of state-controlled universities to prepare journalism students adequately with professional skills and substantive knowledge required for informed, credible, and effective coverage” of the issues. A bar graph that Sherren (2006) presented, in which the number of sustainability subject counts in the various academic programs in Australian universities was provided, showed the ‘journalism’ field within the zero subject count zone. Although further studies would be needed before an affirmative statement can be made, it is likely that sustainability as a subject still lacks prominence within the journalism curricula.

Based on the above accounts, there appears to be need for what might be termed an ‘educational approach’ of training and educating journalists on S&E issues as such an approach appears to be necessary for achieving improvements to the quantity and quality of environment reporting. Although improvements to environment journalism would require broader changes in newsroom culture and enabling media policies, the ‘educational approach’ appears to addresses one problematic aspect of environment journalism, i.e. the complexity of the issues involved. However, as will be further detailed in Chapters 3 and 4 of this thesis, although training initiatives for environment journalists and the inclusion of environment journalism within the curriculum of journalism programmes have become somewhat more prominent over the years, their effectiveness and their impacts on environmental news reporting have hardly been addressed in academic literature. In addition, there appeared to be a lack of impact assessment methodology for such journalism training and education. Considering the fact that a substantial amount of financial resources goes into the training and education of journalists, an evaluation of effectiveness and impact appeared crucial. The case studies in Chapters 3 and 4 fill this gap in research by providing

³² www.sej.org/careers/index1.htm

assessments of such training and education; thus, an exploration of the 'educational approach.' In addition to an estimate of effectiveness, impact assessment also helps identify problem areas that can inform the development of future training and education.

2.12.4 Constraints brought on by journalistic norms, media routines, and organisational operations

In addition, to the problem of a lack in related background training and education, journalists are also expected to conform to various predetermined news values, in selecting and presenting news, and are also subject to various constraints imposed by media routines and organisational operations. Dennis (1991) indicated that although many media personnel do recognise the significance of the environment as an issue and the need for its communication, they may not have the command to make it happen. This is largely due to the nature of the news-making process which Dennis described in this way:

What the various news media decide to cover is at one level a daily bargaining game between and among competing interests and topics. That bargaining game is guided partly by tradition, but also by structural patterns within the press that value certain subjects and situations more than others (*ibid*: 55).

Likewise Chapman *et al.* (1997: 37) noted that journalists, including editors, are restricted by their organisation's "newsgathering and news distribution mechanism whose very structure usually predetermines the type and manner of coverage"; hence, in reality they have "far less freedom of action, in terms of the day-to-day news production process, than they or their audience tend to assume". Therefore, as Stocking (1999: 30) noted, the characteristics of journalists such as their background knowledge and training may be less influential on patterns of media coverage, in comparison to other factors such as "media routines and organi[s]ational constraints under which journalists work." Some of these constraints include the following:

(i) Editors – the ultimate gatekeepers of environmental news

Any news, including environmental news, is subject to the media gate-keeping process³³ which is typically in the hands of editors and news directors. Despite the fact that editors may have no particular interest in the field of environmental reporting, they "play a decisive role in determining whether or not stories about the environment get printed or broadcast" (Chapman *et al.* 1997: 38). Nelson (1995) reported that a common problem that reporters expressed at each environmental workshop organised by the *Centre for Foreign Journalists* in Virginia, is the difficulty they face with their editors. Likewise, Musukuma (2002: 17) reported that in a workshop on media and the

³³ As described by Hiebert *et al.* (1991:14), media gatekeepers "make decisions about what is communicated and how. They are not usually originators of content; instead, they function internally as creative evaluators. Gatekeepers can be positive forces, improving as well as eliminating content; they can delete, insert, emphasize, or de-emphasize content according to a variety of standards – aesthetic, financial, and those stemming from a professional or organi[s]ational code."

environment, Zambian journalists pointed out editors' lack of interest to be the reason why environmental issues are relegated "to a newsroom back seat." In a study involving American newspaper environment reporters, Archibald (1999) observed that many indicated their relationship with their editors to be a problem. Some reporters in Archibald's study believed that editors' lack of interest could be attributable to their lack of education or experience in environmental issues. In Germany, Krönig (2002) observed that journalists were finding it increasingly difficult to convince editors to include environmental issues in news reports because of perceived impacts on advertisers. Mbuya (1992), himself an editor of a newspaper in Botswana, noticed that one reason why newspapers were not disseminating enough information on the environment in Botswana was because editors tend not to perceive of the environment as a profitable story. Drawing from his experiences as an environmental reporter, Harrabin (2000) pointed out that environmental journalists often need to make an extra effort to sell the story effectively to the commissioning editor, in the very first sentence of their news piece, or risk having the story discarded, as commissioning editors are often faced with an excessive number of story ideas from various sources to choose from. Furthermore, Yang (2004: 91) noted that although newsroom editorial policies may not be explicitly stated, reporters tend to internalise "the policies and confront them through their interactions with the editors, particularly through rewards and punishment from them. For instance, if things are blue-penciled consistently, a reporter learns that his editor expects certain ideas to be treated in a particular way".

(ii) Selection of news based on prevailing notions of news values

As too are all other journalists, environmental journalists are constrained by prevailing notions about newsworthiness in their selection and presentation of news. As we have seen in Section 2.10, much of news comes to be defined as such based on a set of news value criteria. Chapman *et al.* (1997: 40) suggested that it is crucial to understand

journalists' notion of news values and their relationship to the environment as a distinctive news category. It is these values, as perceived by both reporters and editors, that profoundly affect the way environmental stories are selected and then covered. For in the sort of rigid structures that exist within most newsrooms, journalists, anxious to see as much use as possible made of their material, are obliged to try and fit their stories into the existing concepts of 'news.'

Friedman (1983) observes that one of the most prevalent traits of journalism is 'hard news' and the emphasis on currentness. This means that the timeliness of the event, determines its coverage rather than just the subject matter (*ibid.*). Therefore, this "creates an emphasis on covering fast-breaking disasters such as oil spills, staged events such as protest marches and lawsuits, and announcements of 'newsworthy' people such as politicians" when it comes to environmental reporting (*ibid.*: 27).

In addition to a predetermined set of news values, journalists are also constrained by their editors' perceptions of news value. For instance, Friedman (1983) noted that lacking scientific knowledge,

editors may see a need to add to a newsworthiness of a story by emphasising conflicts or writing exaggerated headlines. To please editors and get ahead, reporters tend to frame stories in accordance to their editors' perception of a good story. Harrabin (2000: 54) observes that editors, fearing "the scorn of their colleagues" are often reluctant to cover a new issue "unless it has been verified as a valid news story by another (or preferably more than one other) news outlet". For instance, when genetic modification first emerged as an issue, "few news editors had the confidence to highlight such an unusual story. Then, stories on GMOs eventually began to break in the news, until the critical mass of news editor knowledge was reached and GMOs were certified as a 'good story'" (*ibid*: 54-55). Therefore, editors' views about newsworthiness can become an obstacle to environmental reporting.

(iii) The journalistic norm of balance and objectivity

As mentioned earlier, journalists are expected to adhere to the journalistic norms of balance and objectivity to ensure neutrality in the daily conduct of their work. Nelkin (1987) observes that some newspapers impose specific constraints on their journalists to ensure adherence to neutrality. For instance, reporters may be asked to keep out of politics or community matters that could threaten their ability to remain objective (*ibid.*). Stocking (1999: 33) observes that mainstream journalists in the U.S. are "expected to routinely seek opinions from all sides, with an eye towards balancing one view against the others in their account." Dennis (1991: 59) maintains that in addition to "fairness", "separation of fact and opinion", and "balance", in the "American media's ideological code of objectivity", journalists are also expected to maintain an "emotional detachment".

Stocking (1999: 33) observed that news sources who are aware of "this ritual, and other media routines, often manipulate them to their own ends." Stocking exemplified that such was the case when a small number of disagreeing scientists demanded that they be given equal time in news coverage against a panel of 2,500 scientists' consensual views about climate change in the late 1990s. Likewise, Pawa and Krass (2006) reported that with the use of public relations tactics and industry-funded sceptics, the power, coal, oil, and automobile industries managed to create a perception through the media that there was still a lack of scientific consensus about global warming. Because of reporters' obligation "to report both sides of a story, they repeatedly have fallen prey to" this industry tactic (*ibid*: 497). Hager and Burton (1999: 117) noted how a logging company in New Zealand used well devised strategies and tactics to influence journalists and editors, "to get better than balanced news coverage of their viewpoint".

Still, it remains a fact that journalists believe they need to adhere to journalistic objectivity and balance. In a recent survey of environment reporters in four regions in the US, Sachsman *et al.* (2006: 111) found that a majority of these reporters stressed the need for environmental journalists to be objective and the need to "to be fair to both corporations and environmental activist groups."

(iv) Commercial pressure

Journalists may also be indirectly constrained by their organisation's ownership and commercial interests in terms of protecting advertisers and investors. However, as Rosenberg (2002: 86-87) observes, journalists may not clearly see evidence of such constraints as some of these influences are subtle; for example, the "conscious or unconscious self-censorship by journalists who get to know what is editorially acceptable and see no point in challenging that" and the "selection of staff (especially at senior levels) who will reflect the owner's philosophies". In the same way, as has been detailed in Section 2.9, others have observed that journalists may not be clearly aware of how their reporting might be impacted by their organisation's commercial interests (Goodell and Sandman 1973; Yang 2004; Sachsman *et al.* 2002; Sachsman *et al.* 2006).

However, in spite of "journalists' denial of any pressure from the management or advertisers," Yang (2004: 103) argued that "the recent decision of Fox to withdraw an investigative story on chemical giant Monsanto proves the existence of such pressure." Yielding to Monsanto's threats, Fox Network "fired two reporters who did an investigative report on Monsanto's growth hormone" (*ibid*: 101). However, Yang says, "pressure from a parent company or from advertisers is rarely" publicised; hence, it is difficult to gauge the extent of their influence on news (*ibid*: 103). Reporters in Yang's study, however, believed that those in higher positions with the media hierarchy "who decide in the first place what is to be covered and what is not may feel more direct pressure from the advertisers or the management" (*ibid*: 102).

(v) Legal constraints

Another constraint to environmental news reporting that Yang (2004: 103) identified in the U.S., was "concerns about legal disputes" which puts a restraint on "what can be said and what cannot in the news. Reporters are constantly reminded of the possible legal consequences of their actions, and this discourages them from actively criticizing the status quo" or powerful bodies. The removal of information that may lead to legal disputes "prevents many issues from being explored in depth" (*ibid*: 102).

Similarly, in New Zealand, Hager and Burton (1999: 117) observed how the logging company Timberlands, whose environmental impacts were called to question, had in many instances targeted "...journalists who included criticism of Timberlands in their stories and...[used] legal threats in an attempt to scare off news organisations reporting on the environmentalists' case."

(vi) Lack of staff number

A major criticism of the media, as we have seen in Section 2.10.1 above, has been their lack in environmental news coverage. However, the size of a media organisation, and thus its staff number, may restrict its environmental coverage. Moreover, news organisations often reduce staff number to cut costs (Harrabin 2000; Lord 2002). Staff cutbacks sometimes mean experienced environmental journalists are let go (Lord 2002). Inevitably, as Tully (1991: 1) observes, in “an understaffed newsroom”, reporters are “overstretched”, and are hardly able to “keep up with routine news let alone provide depth and analysis.” Providing a perspective as an environmental journalist, Bruggers (2002: 37-38) highlighted the problem of lack of staff number as a significant problem of the field:

With newsrooms shrinking, there's more pressure on individual reporters to produce more copy. Larger news organi[s]ations still place a premium on enterprise reporting, going well beyond the press releases and the events and digging deeply. But it's harder than ever for smaller newspapers to support this kind of time-intensive reporting. And with smaller staffs come editors' demands for long-term story planning, and this means having to promise to deliver multiple stories at a time, for two, three, four weeks in advance.

Griswold and Swenson (1993) associated the inadequate coverage given to waste disposal problems in four rural newspapers in Georgia to a lack of staff number. They reasoned that it was outside of the capacity of the small weekly newspapers to provide in-depth coverage of complicated stories. Maloney and Slovonsky (1971: 71) observed that “larger newspapers, with the manpower to handle such assignments, tended to run the most page-one pollution stories and editorials” They noted that coverage of some major issues sometimes require several journalists working several months to produce a story. Therefore, staff number inevitably has an impact on the quantity and quality of environmental news reports.

(vii) Time pressure

As detailed in Section 2.10.10, the media's ‘lack of depth’ in their coverage of S&E issues was a significant point of criticism. To some extent this may be attributed to journalists’ lack of time to provide deep coverage. As Friedman (1983: 25) observes, there is often a lengthy “string of interrelated concerns that all have an impact on people’s lives, and the environmental reporter needs to deal with all of them in order to cover a story properly. But to investigate all of these aspects takes time – something a reporter frequently does not have.” Harrabin (2000) noted that journalists are often aware that they are oversimplifying the story, but are left with no other choice if they are to fit in the story within the allocated time frame. “These problems are exacerbated by the inevitably tight limits on journalistic research time” which in turn prevents the exploration of the various angles of an issue (*ibid*: 52).

Archibald (1999: 30) observed that “even little stories can take all day and require contacting numerous experts”; consequently, deciding on what subjects are worth the time becomes a problem. In their study Detjen *et al.* (2000: 11) noted that a significant number of environmental reporters indicated time to be a major problem. Sachsman *et al.* (2006) as well found that time constraint was the most frequently cited barrier to environmental reporting in all four regions of their study in the United States. Likewise, Sessions’ (2003) study of science journalists in New Zealand (which included environmental journalists) showed time as a major constraint preventing evaluation of scientific claims.

(viii) Competition and space constraints

The difficulty journalists face in reporting complex S&E issues are intensified by limitations in space allocated for coverage. Chapman *et al.* (1997) described the newsroom to be an extremely competitive environment. In addition to competition between various news areas, there is also competition within a single area, since individual journalists need to compete with each other to gain the upper limit in space (*ibid.*). This competitive environment ensures that the newsroom gathers more stories than it can accommodate – for the media organisation this is an advantage as it means having stories on standby (*ibid.*). The competitive environment is also “supposed to ensure quality – this is based on the assumption that within this competitive jungle journalists will strive that much harder to ensure that their stories are of the highest quality” (*ibid.*: 37). However, “in such an atmosphere the amount of time and space given to relatively new subject areas, such as the environment, comes under intense pressure; consequently the nurturing that new subject areas require is often neglected” (*ibid.*: 37). Friedman and Friedman (1989: 32-33) observe that it is often the case that the “environment usually falls far down on the list of news items competing for space.” Sandman (1974: 210) exemplified space constraint in the San Francisco *Chronicle* in this way:

The daily news hole (nonadvertising space) of that newspaper is about 4,000 column inches. Roughly three quarters of this volume is reserved for sports, comics, columns, business, society, and other specialized departments – all with established and devoted readerships. About 1,000 inches a day are available for local, state, national, and international politics; crimes, accidents, and disasters; education, art, religion, science – and environment. An editor would find it difficult to justify to readers devoting more than 5% of the paper’s nonspecialized news hole to environmental problems.

Archibald (1999: 29) noted that although the complexities and uncertainties of environmental issues call for extra space, environmental journalists in the U.S. often found that “they could not get enough space to properly report their stories.” Likewise, Yang (2004), and Sachsman *et al.* (2006) reported that environment reporters in the U.S. indicated lack of space to be a major barrier to environmental news reporting. Harrabin (2000) observes that space limitations often obstruct a journalist’s opportunity to embrace complexity. For instance, complexity is difficult to convey to a radio audience, when the journalist is expected to tell a story, within 50 seconds, using an

approximate 150 words “written in an accessible fashion that will engage the listener when he or she is at the bathroom mirror or sorting out the children’s breakfast cereal” (*ibid*: 52). Although news bulletins on television allow a slightly longer two minutes, this is still insufficient time for a reporter who is expected to match the script with available footage while at the same time conveying a broader aspect of the story (*ibid*).

From another perspective, Archibald (1999) observed that the issue of story length was not as simple as it may appear. Some reporters in her study indicated that even if space was available, longer stories were not necessarily better. One reporter indicated that this was because longer stories of complex issues are likely to lose reader interest at each additional paragraph. Such stories are likely to be appealing to a specific group of readers with an interest in the topic, but may not appeal to general audiences. Therefore, according to many reporters in Archibald’s study, it “makes the longer, harder to read environmental issues harder to sell and harder to get space for” (*ibid*: 29).

(ix) Resource constraints

Resource in terms of finances poses a major constraint to environmental news reporting. Goodell and Sandman (1973: 51-52) maintain that many of the problems environmental journalists face which include

space, time, expertise – boil down to a question of money. Many newspapers and broadcast stations feel they cannot afford the luxury of even one environmental specialist, much less three or four. And the idea of freeing an expert to spend days investigating a single company, to produce a long article that advertisers will find offensive and readers will find boring, must sound absurd to the average publisher.

One criticism of media coverage, as we have seen in Section 2.10.7, is the focus on local issues at the expense of international issues. This may be associated with the high cost that coverage of international stories entails. Harrabin (2000) observes that coverage of sustainable development issues of international interest or those pertaining to developing countries are often limited because of high costs that would be incurred in terms of journalists’ travel time and expenses. As a result, distant events are less likely to be covered (*ibid.*).

In Archibald’s (1999: 30) study, several environment reporters indicated “that what really worried them was the steady decline in resources available at newspapers, especially the time and money that are needed to do longer project stories.” Likewise, Sachsman *et al.* (2006) found that “financial, travel, and resource concerns were” were the second most frequently cited barriers to environmental reporting. Chapman *et al.* (1997: 49) noted that many environmental journalists in the UK and international agencies indicated “the cost of their stories...[to be] the single biggest factor inhibiting the amount of coverage they can achieve.”

Environmental reporters may also be constrained in term of other resources such as the assistance of a photojournalist. Ahmad (2005: 298) suggested that photography was a “desirable skill for the environmental reporter” considering that “the priority for the assistance of a photojournalist usually goes to covering politics, crime or sports events. Assistance for the environmental reporter comes last.”

Resource constraints can sometimes be in the form of lack of accessible information. For instance, Kelly (1999: 53) observed that almost consistently “journalists in tropical countries” lacked “access to information and environmental data”. In South Eastern Europe, Tabakova and Antonov (2002) observed the lack of relevant and timely information available to journalists to be a major hindrance to the quality of environmental news reporting. Musukuma (2002) observed that journalists in Zambia often had very little or no information about environmental issues. In Botswana, Mbuya (1992: 139) noticed that “institutions in the country which deal directly with environment type issues keep away from the media”, hence, limiting journalists’ accessibility to relevant information. In addition, Freedman (2004) observes, journalists in Uzbekistan have very limited or no access to Internet facilities for conducting research.

(x) Other constraints, difficulties and setbacks

In addition to the above, there are other difficulties and setbacks that environmental journalists face which are less obvious and therefore less often discussed. For instance, Detjen *et al.* (2000: 11) found that “women environmental reporters [were] paid less than men, even when factors such as education and experience that might reasonably explain such differences [were] taken into account.”

In the U.S., Ward (2002) observed that environmental journalists face the problem of derisive nicknames by co-workers. Frome (1998) noted that those regarded by employers as overzealous were reassigned or removed from the beat. Frome (1996) provided several accounts of environmental journalists who, perceived to have undermined objectivity by their editors, were transferred to other beats. Frustrated, these journalists often quit (*ibid.*). Frome further commented: “Journalists attempting to cover the environment are subject to this kind of treatment more often than you would think” (*ibid.*: 204).

Case (1993) pointed out that in pursuing their stories, environmental journalists sometimes put their healths at risk. Many environmental journalists, he says, expose themselves to health hazards, often unthinkingly, when they visit sites of chemical spills and pollution. Case further noted that despite evidence of such risks to environmental journalists, at present, most news organisations do not have relevant safety policies in place.

Environmental journalists in developing countries face a different set of problems. Friedman and Friedman (1989: 31) found that in most Asian countries, the media are often under some form of Government censorship. They noted:

Publications usually must hold licenses or permits that are issued by the government. Even where this is not the case, the government is often a major advertiser and could cause a publication to fail by pulling its advertising. When a government does not want a particular subject covered in a certain way – or, perhaps, at all – editors often bow to the pressure (*ibid*: 31).

They observed that Asian reporters also endure low salaries and lack of prestige. In addition, physical assaults and threats have led some of these journalists to become more cautious about what and who they write about (*ibid.*). In Uzbekistan, where the media system continues to be firmly controlled by its government, Freedman (2004: 155) observes that journalists “operate under self-censorship for fear of repercussions.” Freedman added that in practising their profession, environmental journalists are faced with the risk of lawsuits, imprisonment, persecution, and harassment. Likewise, Gee (2000: 213) pointed out that the occupational “hazards of media reporting on the environment in European countries are minor compared to the restrictions imposed on journalists in many [other] countries, where to report critically on any aspect of the environment is to run the risk of death or imprisonment.”

Considering the above constraints journalists are known to endure, in this study, journalists were asked to indicate those that they faced in the course of their work. This information was considered particularly important since improvement to media coverage of S&E issues would require the addressing of these constraints.

2.13 Objectivity versus advocacy – a debate that persists in environmental journalism

Day (1990) argued that the concept of journalistic objectivity was a myth. “The doctrine of objectivity”, he says, is built on the notion that journalism merely reflects what is happening in society and that the journalist is merely a messenger. He disputed these notions, indicating that journalism only reflects selected scenes in society, and “the messenger not only delivers the message but also chooses the topic and writes the message” (*ibid*: 11). In addition, he debated that social reality was not something that exists objectively to be captured and mediated. Writing on advocacy, on the other hand, Ryan (1991: 81) suggested that in a sense it is not possible “to take an advocacy position on the environment” simply because no one is actually against the protection of the environment.

Putting together the above two perspectives, the proposed argument of objectivity versus advocacy in environmental reporting could be brushed-off – assuming instead that neither objectivity nor advocacy exists. However, as has been addressed in Section 2.10.12 above, objectivity is still a

cause for concern among those who have analysed media reports on S&E issues. Advocacy journalism, in contrast, is seen as problematic within news organisations that uphold objectivity. Therefore, the age-old objectivity-advocacy debate still persists to date in the field of environmental journalism. As LaMay (1991: 104) observes:

The objectivity-advocacy debate has become a fixture at environmental reporting conferences, a time-consuming and unfortunate distraction...At the center of the argument are reporters and editors who say it is their duty to 'empower' their readers, to give them answers to problems; these journalists are opposed by those who ask (confidently and rhetorically) if the environment is really any more important or deserving than, say, education or foreign policy.

Detjen (2002) maintains that there are constant debates among environmental journalists with regard to objectivity and advocacy. Willis (2003: 11) observes that even *The Society of Environmental Journalists* appear "split over the debate." Detjen (2002) noted that while some insist that journalists should adhere to the truth and be as precise as possible in reporting all viewpoints in a balanced manner, others debate that objectivity is not possible in environmental journalism and that journalists should use the power of the news media to bring about changes by educating the public about the seriousness of the problems and advocating for improvement to planetary quality. Similarly, Nelson (1995) observes that there have been an increasing number of journalists in recent years who believe that the basic principles of journalism cannot be applied to environmental issues. Considering that it concerns the future of the human habitat, these journalists argue that environmental journalists need to become advocates of environmental protection (*ibid.*).

Exemplifying the advocacy position, Ka'au (1995) asserted that the seriousness of the state of environmental issues in the Pacific require environmental journalists who believe in the need for an alternative society, and their reporting should promote this vision and ideals with the aim of altering societal views. Also reflecting this perspective, Frome (1998: ix) stressed the need for advocacy in environmental journalism as it concerns the protection of the planet. Frome suggested that environmental journalists should "look beyond objectivity and the limits of professionalism" (*ibid.*: 36). Professionalism, he says, is sometimes used "to block expressions of pity, grief, or outrage at wrongdoing, and in other instances to silence dissent" (*ibid.*: 39). He thus argued that although "valid scientific and technical data" will continue to be crucial to environmental journalism, it would require more – "a feeling, a philosophy, love of earth, love of life" (*ibid.*: 39). This, he asserts, is necessary because transformation at an individual or societal level would depend on "intangible values of human heart and spirit. To say it another way, individual empowerment derives from learning through feeling, independent thinking, and social involvement" (*ibid.*: 39). Also, stressing the significance of advocacy journalism, Ryan (1991: 84) suggested that "the environment may be the one area where you can say advocacy journalism is appropriate, indeed, vital" because it concerns "*survival* in the grandest sense of the word." She argued that since environmental problems increasingly require public response and action for their solution, balanced reporting may no longer be appropriate.

Nelson (1995), however, commented that while journalists who work in an environmental magazine may see the need for such advocacy, most professional journalists would tend to have a differing opinion – that reporters can provide a better service to readers if they did not become ‘crusaders’. Although no one would favour pollution, people may differ in their ideas – for instance, on how a problem should be handled, or if an attempt to reduce pollution is worth the costs (*ibid.*). Such differences, in Nelson’s view, are “matters of legitimate disagreement” (*ibid.*: 36). Since peoples’ values are diversified, an environmental journalist “should not impose their values on a story. A journalist’s good basic skills should win out: fact-finding, verifying, and presenting information clearly” (*ibid.*: 36). In contrast, Ryan (1991: 88) argued that advocacy journalism is no lesser in merit:

I would never assume that by being an advocate, a journalist is absolved from following the common guidelines of fairness. Your facts must be secure, and you must be ready to defend them. Neither does advocacy lessen the quality of the report or the journalist...advocacy does not mean that reporters take a more personal point of view. It may not be balanced, but it is quality journalism.

Still, Nelson (1995) debated that advocacy in environmental journalism may mean a compromise of truth – a journalist convinced of an environmental problem may tend to report on studies that confirm the problem while ignoring scientific information that has disputed its seriousness. Another risk of advocacy journalism, Nelson noted, is that a story may be discredited as propaganda if people sense biases in the storyline. Losing credibility is a big risk to take since it is difficult to regain, once lost (*ibid.*). Likewise, Detjen (1991: 94) commented:

I believe that advocacy journalism, if it means one-sided and unfair reporting, is misguided and in the long run counterproductive. If major newspapers, magazines and broadcast stations adopt an advocacy philosophy, the media will be treading on dangerous ground that could alienate readers and viewers and cause them to stop trusting the media. Journalists who have spent their careers establishing reputations for fairness and accuracy could suddenly find their credibility evaporating.

Nelson (1995) proposed that what is essential instead is fairness in reporting. He clarified that fairness in reporting does not necessarily mean that all views are presented as equals, as some reporters may assume. Instead it means that while all parties involved are given an equal opportunity to convey their arguments, the reporter is obligated to evaluate these arguments and present the story truthfully (*ibid.*).

Perceptions about advocacy and objectivity in journalism may vary between media types and between media organisations in different countries. Detjen (2002) suggested that mainstream newspapers, news magazines or broadcast stations are more likely to subscribe to the objectivity norm. Environmental magazines and alternative media, he says, are more likely to take the advocacy approach (*ibid.*). Developed countries such as the United States, Japan and those in Western Europe, according to Detjen, are likely to support objectivity, while countries in

developing regions such as Africa, South America, and parts of Asia are likely to be in favour of advocacy. Accordingly, Chapman *et al.* (1997) observed such a difference between Western and Indian journalists. They found that a majority of reporters in Northern countries indicated that they take a neutral approach to environmental controversies. Conversely, none of the Indian journalists in their study claimed neutrality or objectivity to be part of their profession. Nelson (1995) observes that in developing countries, reporters are sometimes faced with the pressure of having to advocate the positions of the government. In these countries, development initiatives are often given a high emphasis, and there is a tendency among officials to make journalists feel that they have a responsibility to promote the idea of development (*ibid.*). Likewise, Freedman (2004) experienced difficulties in conveying ‘objectivity’ and ‘neutrality’ to journalism students in Uzbekistan because of an underlying notion of that journalists have a patriotic duty to support the government’s developmental work.

Nonetheless, there may be differences in editorial judgment on the need for objectivity and balance even within the mainstream media in developed countries. For example, in their US-based survey of newspaper editors, Maloney and Slovonsky (1971: 74-75) found that while some editors called for “objectivity and a cautiously balanced approach” in reporting pollution issues, others “favoured a more aggressive stance” and had even suggested the need for advocacy. In a study involving environmental reporters in New England, USA, Sachsman *et al.* (2002: 433) observed that the reporters “struggled with the choice of remaining objective in their journalism or aiding the environment.” Their responses “at times, appeared contradictory. More than 98 percent of the reporters agreed they need to be as objective as other journalists. Yet 40.8 percent said reporters sometimes should be advocates for the environment” (*ibid.*: 433). In another US-based study, Sachsman *et al.* (2006: 118) observed that although a majority of environment reporters “disagreed with the idea of working with community leaders to solve environmental problems and with the statement that environmental journalists sometimes should be advocates for the environment”, they found that a substantial minority had indicated the contrary. In a comparative examination of news media coverage of environmental risks in the United States and Germany, Dunwoody and Peters (1992: 211) found that while American journalists believed in the need for balance, German journalists believed that they had “more freedom to make validity judgments” often prompting the criticism that they engaged in “opinion journalism.”

In light of the objectivity-advocacy dispute in environmental journalism, Detjen (2002) drew attention to Carl Frankel’s³⁴, suggestion on the need for an alternative approach to environmental journalism, termed ‘sustainable journalism’, that compatibly includes both advocacy and

³⁴ Carl Frankel is the author of *In Earth’s Company: Business, Environment and the Challenge of Sustainability*.

objectivity. Detjen noted that according to Frankel, ‘sustainable journalism’ is based on the following three principles:

It incorporates the best aspects of traditional journalism – diligent research, precise language, and fair reporting.

It strives to educate people in a balanced way about the nature and importance of sustainable development or the effort to achieve both economic development and a sound environment.

It supports dialogue between people in an effort to find solutions (*ibid*: 39).

In agreement, Detjen maintained that Frankel’s suggestions were in line with the course of public or civic journalism. Detjen hence iterated the need for the alternative approach of ‘sustainable journalism’ and suggested that its components could include:

Increased access to environmental information by citizens and members of the news media through the expansion of open records laws and freedom of information acts.

Expanded coverage of international environmental issues, such as global climate change. This coverage should provide evidence to readers, viewers and listeners of links among environmental, economic and social issues.

New global institutions to make multinational corporations, which own many of the world’s newspapers, magazines and broadcast stations, more accountable about their own environmental track records.

Increased coverage of promising solutions to complex environmental problems (*ibid*: 39).

The above accounts illustrate that there are varying views with regard to objectivity and advocacy in environmental reporting. Proponents on both sides have stressed on the merits and rationales that have formed justifiable arguments for both these forms of journalism. Perhaps because of such a stand, environmental journalists still struggle to balance objectivity and advocacy. Considering that the objectivity-advocacy debate still persists in the field of environmental journalism, this aspect was addressed in Chapter 3, where journalists from developing countries were asked to indicate their stand in the debate and their views about the proposal for the alternative approach of ‘sustainable journalism’ that Detjen (2002) noted.

2.14 The engagement of alternative media in sustainability and environmental communication

As detailed in section 2.9, many have observed the limitations of the mainstream media in communicating S&E issues because of their commercial interests, the various norms and routines that govern their operation, and the competitive newsroom environment. Therefore, it appears that while there is a necessity for improved mainstream media coverage of S&E issues, there is also a need for alternative forms of information channels through which issues can be discussed at a deeper level that may not be possible in news reportage – pointing to the need for engaging non-mainstream³⁵ alternative media.

³⁵ Non-mainstream media channels have been referred to with a range of synonyms including community media (Howley 2005), grassroots media (Atton 2003a), citizens’ media (Schaffer 2005; Rodriguez 2000), and alternative media (Rodriguez 2000; Atton 2003a). Regardless of what they are termed, the objectives of these

The engagement of alternative media in S&E communication could offer several advantages. These media channels are often unrestrained by journalistic norms and media routines, and are often not subject to constraints brought on by commercial interest. The *World Youth Report 2003* emphasised that it may not be possible nor would it be desirable to be rid of the mainstream media's "emphasis on spectacles and events" considering that "it does at least help bring environmental issues to the public's attention" (United Nations 2004: 144). What needs to be done instead is to counterbalance such information with in-depth coverage in alternative media channels "that are not constrained by the need to entertain and can move beyond the event focus of the established media", although the reach of such alternative media channels might be limited when compared to that of the mass media (*ibid*: 145).

Environmental groups in particular may find the engagement of non-mainstream media channels to be a useful way for communicating perspectives and in-depth information that cannot be communicated through the mainstream media. Dennis (1991: 64) suggested that environmental interest groups need to realise that they represent only one of many "competing topics, issues and constituencies" that the media has to deal with. Therefore a more strategic communication approach through a diverse media system would be necessary (*ibid.*). In addition, this thesis suggests that while communication-based strategies such as social marketing, advocacy campaigns, and awareness raising campaigns are necessary to facilitate social change for sustainability, the implementation of such strategies through the mainstream media channels may not be easily feasible. Alternative media, on the other hand, are capable of providing the channel for such communication.

In addition, alternative media also offer space for advocacy journalism which many have noted to be necessary for S&E communication. Ryan (1991: 84) suggested that for advocacy journalism to have its place, a kind of counterbalanced situation was necessary, in which, alternative media channels provide the space for advocacy journalism, while other mainstream organisations continue "to provide what would be considered a more balanced perspective."

In light of the rising dominance of commercial media institutions and the decline in public service broadcasting, Howley (2007: 345) suggested the need to "evaluate community media's role in constructing discursive spaces for [marginalised] groups and individuals". There is also a need, he says, "to consider community media's role in promoting a more democratic media culture" (*ibid*: 357). Likewise, in New Zealand, Collins and Rose (2004) stressed the role community news media could play in strengthening democracy when mainstream news media (because of their commercial orientation) fail to provide the arena for alternative perspectives or in-depth coverage of issues

media are quite alike, in that they aim to provide alternative perspectives that are not provided for in mainstream media channels.

deemed not newsworthy. In addition, Rodriguez (2000: 150) suggested the many ways through which citizens' media can facilitate social change toward more democratic societies: firstly, by giving "voice to the voiceless"; secondly, by involving people in media projects and fostering community empowerment; thirdly, by connecting "isolated communities"; and finally, by serving as an independent "alternative sources of information".

Despite these observations, this review found that very little academic research has been devoted to examining the potentials of alternative media in facilitating social change for sustainability. In addition, Downing (2003) observed that there was also a lack of enquires on how audiences receive and use alternative media. This thesis hence suggested the necessity of engaging alternative media channels for broader improvements to mediated communication of the environment and sustainability. Considering the lack in related research, in Chapter 6, this thesis examined the engagement of a community news media in implementing a strategically designed information campaign on sustainable consumption.

2.15 Exploring the potentials of mediated information campaigns and strategic message framing

The mainstream news media are limited in their ability to educate on the environment, since intentional persuasion violates the principles of journalism (Sandman 1974). As Durfee (2006: 462) notes, "news reports are not designed to be persuasive, nor do they have explicit persuasive intent". Persuasive and effective communication, on the other hand, appears necessary for bringing about social change for sustainability. However, there appears to be little in terms of research that has examined the application of such communication in independently organised mediated information campaigns propagating sustainability.

The majority of available literature on persuasive and effective communication appears to be focused in fields such as marketing and advertising. While there has been some research focus on the use of information campaigns to promote social and health issues such as anti-smoking, drink-driving and Aids (Randolph and Viswanath 2004), by comparison, there appears to be very little guides for designing information campaigns on sustainability. Furthermore although the strategic framing of messages is an essential aspect that determines the success of such campaigns and has been widely used in political campaigns (Nelson, Oxley and Clawson 1997), and in health communication (e.g. Jenner *et al.* 2005; O'Keefe and Jakob 2007; Rothman *et al.* 1993; Rothman and Salovey 1997; Salovey and Williams-Piehota 2004; Wilson *et al.* 1988), it appears to be only beginning to be considered within the context of S&E communication.

Mediated environmental information campaigns have largely focused on specific behaviours such as recycling, energy conservation and water conservation, or specific issues such as the greenhouse

effect. For instance, Winett *et al.* (1984) analysed the impact of a television programme on energy saving strategies on household energy saving behaviour in Virginia and found significant improvements to energy savings. Farhar-Pilgrim and Shoemaker (1981) analysed the impact of mass media information campaigns on energy conservation. They found that the campaigns did result in significant effects on awareness and expressed intended behaviour. Syme *et al.* (1987: 457) evaluated a television campaign designed to promote petrol conservation in New South Wales, Australia and reported that the campaign did result in “positive effects on most measures of attitudes and beliefs, future intentions, and self-reported conservation behaviour.” In their evaluation of an advertising campaign on a concept termed ‘precycling’ which encouraged waste reduction through well thought out shopping choices, Gillilan *et al.* (1996) found significant increases in knowledge about the concept although no increase in related activities were observed following the campaign. Staats, Wit and Midden (1996) evaluated the impacts of a mass media campaign on the greenhouse effect in the Netherlands and found that knowledge and awareness about the problem were not very instrumental in promoting behavioural change. In New Zealand, Frame and Newton (2007) examined government sponsored social-marketing advertising campaigns that targeted issues such as energy efficiency, fuel dependency, air quality, transportation and recycling. They found that the advertisements contained an authoritative element, which assumed the expertise of government agencies, but at the same time understated sustainability as a contested concept, and downplayed its complexity – hence may not have gone far in building public knowledge about sustainability.

Some research on environmental communication campaigns have focused on the design and evaluation methods for campaigns targeted at specific behaviours. Using a focus group methodology, DeLorme, Hagen and Stout (2003) recommended approaches for message content for an educational campaign on water conservation, and provided recommendations on the engagement of media channels. Syme and Seligman (2000) focused on the evaluation methods for water conservation campaigns. They observed that the evaluation methodology employed did determine the degree of observed effects of a campaign. They noted that “qualitative reviews and quasi-experimental evaluations” provide more accurate measurements of water savings compared to regression-based estimates (*ibid*: 572).

Others have provided general recommendations and guidelines concerning the design and implementation of environmental communication campaigns. Clarke *et al.* (1985) provided some general guidelines on the necessary steps to be taken in developing an effective communication strategy for altering consumers’ environmental behaviours. Their suggested steps included the identification of a target population; defining the population’s characteristics in terms of size, demographics, lifestyles and media habits; designing an appropriate message; and, the selection of a medium of implementation based on information about the degree of its usage. Neijens and Smit

(2002: 148) suggested that since we live in an “information-rich society” in which people are exposed to a large quantity of information via the media each day even carefully crafted messages would be of no use unless the target audience is exposed to them. They suggested that to enhance the chances of message receipt, campaigners would need to carefully select the medium of implementation, taking into account that the communication power of different media vary, in addition to variations in their reach and costs. Furthermore, they would need to consider the most appropriate media section as well as the frequency of the messages, and their timing. In a publication titled *Communicating Sustainability: How to produce effective public campaigns*, the United Nations Environment Programme compiled a range of guidelines and ideas that could be adopted in developing communication campaigns on sustainability (UNEP 2005). The guidelines noted various communication formats such as the use of leaflets, exhibition space, workshops, advertising and web-based tools to promote specific issues that have been successfully used in different countries.

As indicated earlier, very few studies have examined the message framing strategy within the context of S&E communication. Davis (1995) explored the effects of different forms of message framing in environmental communication on attitudes and behaviour. Davis distinguished three types of frames: “...definition of the problem (gains and losses), the target (current and future generations), and recommended activities (‘taking less,’ as in conservation, or ‘doing more,’ as in recycling)” (*ibid*: 285). Davis found that frames that “discussed losses to the current generation gave rise to the most positive responses to the communication and the highest levels of intent to participate in environmentally-responsible behaviours” (*ibid*: 285). Frames on activity, in contrast, did not result in “any influence on attitudes or behavioral intentions” (*ibid*: 285). Davis hence concluded

that intentions to participate in environmentally-responsible behaviors are best fostered through communications which present simple, clear, and understandable actions presented in a context which stresses how the target will be personally, negatively affected if they continue to be inactive participants in environmentally-responsible behaviors (*ibid*: 295).

Testing the implications of two forms of social marketing appeals commonly used in environmental communication, Obermiller (1995) found that the effectiveness of the two appeals was dependent on the issue and its relative salience. The first, termed the ‘sick baby’ appeal, which focuses on the severity of the problem and the need for solution – may be suited for problems that are unknown or perceived to be unimportant. The second, termed the ‘well baby’ appeal, which focuses on the positive outcomes of individual actions – may be suited in dealing with problems for which a high level of concern already exists. Oepen’s (2000c: 159) ten-step guide to developing an effective environmental communication strategy did include recommendations for message effectiveness, as follows:

For a message to be successful, the information should be accessible, accurate, verifiable, complete, timely and relevant. Message effectiveness (M.e.) is a function of the reward (R) the

message offers and the efforts (E) required to interpret and understand it, hence $M:e = R:E$. This concerns both the textual and visual or audio information in a message.

Information and communication campaigns targeting specific issues and behaviours, as the preceding accounts illustrate, are highly essential considering that attitudinal and behavioural changes are the ultimate objective of most environmental communication campaigns. However, with the exception of Davis (1995) and Obermiller (1995), the above accounts give little clear insight into exactly how messages about sustainability might be framed effectively. This may be due to an underlying assumption that a general awareness of sustainability already exists among members of the public. While this may very well be true to a certain degree, as has been addressed in Section 2.5 of this review, many have indicated that there remains a lack in public understanding about the meaning of sustainability. Therefore, it is arguable that public understanding of sustainability may have been overestimated. Such a lack in understanding may be particularly prominent for the concept of ‘sustainable consumption’ that emerged more recently. For instance, in reference to sustainable consumption, Kurowska (2003: 237) maintains that although it concerns “one of the most important issues facing the world today...many consumers are confused about what the term means.” Shanahan and Carlsson-Kanyama (2005: 298) argued that the lack “of feedback to individual households in the North” about the impacts of their consumption on the lives of people in low-income countries, poses “a serious barrier for change towards more sustainable consumption habits” and stressed the necessity for improvements to public communication about the impacts of production and consumption. Yet, this review found no studies that have focused on how ‘sustainable consumption’ as a concept might be framed in an information campaign with the purpose of enhancing understanding of its meaning.

In light of the above lack in research and literature, the case study in Chapter 6 of this thesis provides a description of how messages about sustainable consumption might be framed drawing from available recommendations and theories on persuasive and effective communication. The chapter also details the process of design, implementation and testing of an information campaign on sustainable consumption.

2.16 Conclusion

The overwhelming accounts that have attested to the current state of S&E problems require little reiteration to establish that these problems are of significant importance to human society. Advertising driven consumerism is a particularly persistent problem that appears to contribute in various ways to the decline of the global environment and social inequality, as it grows in intensity across the planet. The concept of sustainability emerged as a human response to this worsening state of its habitat, Earth. However, many have observed a lack of deep understanding about what sustainability means among members of the public. Communication in general and news media communication in particular were hence noted as vital for enhancing public knowledge and

concern, which are in turn necessary for the changes and ameliorating actions that sustainability requires.

This review of literature showed that in many instances members of the public indicated a dependence on the media for information about the environment. A substantive amount of media effects research has devoted attention to establishing links between media coverage of S&E issues and public environmental knowledge, attitudes, and opinion, and the consequent policy formulation processes. The establishment of such links have been fundamental in strengthening the importance of the media's role in the communication of S&E matters. Despite differences in empirical evidence about the degree and nature of such media effects, an important contribution of these previous enquiries is the knowledge that effects *do* exist – providing the grounds for a major assumption in this thesis – that the media are potentially effective channels for conveying related messages.

On the other hand, this review also found that alongside pronouncements of the importance of media coverage of sustainability and the environment, examinations of media content have continued to paint a consistent picture of the media's inadequacies and problems associated with the manner in which these issues are covered. In turn, these observations pointed to the necessity for improvements to media communication of these issues. How this might be done formed a core area of enquiry that warranted the examinations in this thesis.

A major difficulty in environmental journalism derives from the nature of the subjects it entails – S&E issues are often complex, multifaceted, and often involve uncertain scientific information. The task is particularly difficult for journalists since the majority of them covering these topics lack the relevant formal training and education. It may hence be put forward that journalists' inadequacies in communicating sustainability and the environment are to some degree, attributable to this lack of background knowledge – stressing the need for an 'educational approach' to achieving the intended improvement. This review found that in many surveys, journalists covering the environment and sustainability have repeatedly iterated their need for education and training that can provide them with the required expertise to cover these topics. It is perhaps this recognition that has led to several mid-career training initiatives in environmental reporting and the increasing prominence of S&E topics within the journalism curricula. However, scarcely any academic research has examined the impacts of such mid-career training or environmental journalism education, thus little is known about the effectiveness of the proposed 'educational approach'. This research thus took upon itself the task of examining the 'educational approach' in its first two case studies detailed in Chapters 3 and 4.

Considering previous indications of related media dependency and media effects, many have emphasised the educational role of the media; the responsibility they hold in communicating S&E issues; and, the need for media environmental policies; thereby, suggesting a ‘social responsibility approach’ to achieving improvements in their coverage. Even so, this review found that very few scholars have addressed media decision makers directly to find out their receptiveness towards an explicit role in communicating these issues, their perceptions about playing an educational function, or their receptiveness towards policies concerning the coverage of these issues. No previously published studies were found in the context of mainstream media in New Zealand. In the third case study of this thesis, a survey of reporters covering the environment round in New Zealand, and interviews with media managers addresses the lack in existing literature in this area and provides a preliminary exploration of the ‘social responsibility approach.’

In view of the limitations of the mainstream media, some have proposed the engagement of alternative media, which are unconstrained by conventional journalistic norms and routines, for communicating matters of social importance. However, this review found that scarcely any academic studies have examined the potentials of these media in communicating sustainability. Although in many accounts the lack of public understanding of sustainability has been iterated, very few studies have examined how media messages about sustainability could be framed more effectively. Despite the increasing emphasis placed on the necessity for sustainable patterns of consumption, no previous studies have examined how mediated information campaigns could be designed to enhance community understanding on the principles of ‘sustainable consumption’, and its connections with the countervailing forces of advertising driven consumerism. In the fourth case study of this research, detailed in Chapter 6, the design and testing of an information campaign on ‘sustainable consumption’ implemented via a community news media are some steps forward in addressing the observed lacks in literature. The employment of persuasive and effective communication strategies in the framing of the campaign articles provides a preliminary exploration of the ‘message framing approach.’

The above are some gaps in research that this thesis aspired to fill. Rather than continuing with the debate about the degree or nature of media communication of S&E issues and its resultant effects, this thesis concerned itself with what could be done to improve mediated communication these issues. This focus on improvement may offer a way of moving S&E topics more significantly onto the media’s agenda. The chapters that follow contribute to the existing literature on environmental journalism; impact assessment methodology for journalism training and education; and, methods for designing an effective information campaign on sustainability, as well as the methods for its evaluation.

Chapter 3

Impacts of Mid-career Training Programmes in Environment Reporting: An Exploration of the ‘Educational Approach’

“When approaching a technique like the Buddhist training of the mind, we must understand and appreciate the complexity of the task we are facing. Buddhist scriptures mention eighty-four thousand types of negative and destructive thoughts, which have eighty-four thousand corresponding approaches or antidotes...We need to apply many different methods over a long period of time in order to bring lasting results”
(Dalai Lama 2003: 30)

3.1 Introduction

As the Dalai Lama noted, in gaining control over one’s thoughts for the purpose of spiritual advancement, Buddhism prescribes training of the mind. In other areas of human endeavours as well, training is often a prescribed necessity when the task at hand is unusual, difficult or complex. Soldiers are trained for the difficulties of war. Physicians are trained in the complexities of human biology and in the science of diagnosis and medication. However, as was noted in the preceding chapter, despite the complexities, difficulties and unusualness of the tasks at hand, environment reporters are rarely trained in their field. In cases where training in environment reporting has been conducted, little is known about the outcome of such training initiatives due to a lack of long-term impact assessments. This case study fills this gap by accounting the long-term impacts of a series of mid-career training programmes in environment reporting organised for journalists from developing countries; thus, providing an appraisal of the ‘educational approach’ to achieving improvements to news media coverage of sustainability and environmental (S&E) issues. As indicated in the introduction chapter of this thesis, the ‘educational approach’ is one of three broad approaches to improvement explored in this thesis. Chapter 4 will further explore this approach within the context of tertiary journalism education in New Zealand. Chapter 5 will provide an appraisal of the ‘social responsibility approach’ by inspecting the receptiveness of mainstream media organisations in New Zealand towards a responsibility in providing educative coverage of S&E issues. Chapter 6 then introduces the ‘message framing approach’ which is focused on the strategic framing of sustainability messages and stresses the need for engaging alternative media in communicating S&E issues. A summary of the key findings of the four case studies and their implications are provided in Chapter 7, the concluding chapter of this thesis.

As discussed in Chapter 2, lack of training and background knowledge has often been cited as a problem news reporters face when covering environmental issues (Dennis 1991; Friedman 1983; LaMay 1991; Mbuya 1992; West *et al.* 2003). Moreover, the need for training has been emphasised by many environment reporters themselves (Bruggers 2002; Keating 1997; Lord 2002), and

surveys involving environment reporters have found lack of training to be a factor that affected their reporting (Detjen *et al.* 2000; Tabakova and Antonov 2002; Yang 2004). Considering that most journalists are unlikely to have tertiary education in environmental journalism, there appears to be a need for providing these working journalists with the necessary training (Friedman 1994). Without relevant training, journalists may be unequipped to effectively report these often complex, scientific, and multifaceted issues. Moreover, such training “can result in more articles in the public media on environmental issues” (Monroe and Chambers 2000: 69) and improvements to journalists’ news reporting.

In light of the above, the ‘educational approach’ of providing journalists with mid-career training in S&E issues was assumed to contribute to the knowledge building of journalists, and therefore this approach was perceived to be necessary for improving media coverage of these issues. According to Scardamalia and Bereiter (2003; 2006) *knowledge building* concerns creating and improving knowledge that has a dynamic nature in the real world whereby the knowledge could be appraised, modified and applied by others. Applying the *theory of knowledge building* to environmental journalism training, it may be proposed that such training could initiate journalists into a culture of creating and improving S&E knowledge in a manner that could in turn enhance public knowledge.

Although recognition of journalists’ needs has led organisations such as *Bellagio Forum for Sustainable Development*, *Reuters Foundation*, the *United Nations Environment Programme*, *The Panos Institute*, *The Earth Journalism Network*, *Conservation International*, and *World Wide Fund for Nature* to invest in environmental journalism training programmes, the impact of such programmes have not been widely addressed in academic literature. Therefore, little is known about the effectiveness of such training initiatives or their long-term impact on related news coverage; thus, little is known about the effectiveness of the ‘educational approach’ as a means for achieving improvements to news media communication of S&E issues. Becker *et al.* (2004: 2) observed that despite the increasing popularity of mid-career training, “they have received little attention in the literature on journalism education and journalistic work.”

Kirkpatrick’s (1994) four-level evaluation model provides a method for conceptualising the various levels of training impact:

- (i) The first, referred to as, reactions, is said to provide an assessment of participants’ reaction to the training. For example, if they enjoyed it.
- (ii) The second, learning, refers to the training’s effect on participants’ attitudes, knowledge and skills.
- (iii) The third, behaviour, refers to the extent of change in behaviour as a result of attending the training. In other words, if participants had put into practice what they learned.

- (iv) The fourth, results, refers to the final outcomes resulting from participants' attendance of the training. Put differently, if the application of what was learned made a difference. For example, increases in production or improvements to quality.

Kirkpatrick (1976) cautioned that a favourable *reaction* to training does not guarantee that trainees have learned; it cannot be assumed that trainees will put to use what they may have learned; and, at this level of assessment there is no realistic way of determining which impacts are attributable to the training. Based on Kirkpatrick's four-level model, Berger (2001) pointed out the error in assuming impact based on a questionnaire handed out at the end of a training programme, considering that trainees' reaction responses may be influenced by their fun experiences rather than their learning.

In addition to the objective of enhancing knowledge and skills, mid-career training indicatives in journalism often have longer-term objectives, such as to increase the frequency and quality of reporting. For instance, as Kelly (1999: 52) reports, in organising training programmes for journalists, *Conservation International* aimed to "educate journalists about environmental issues and to motivate them to increase environmental coverage", "in the hope that public opinion and policy [might] be shaped to enhance conservation." Becker *et al.* (2004: 2) noted other forms of long-term objectives as follows:

Journalists who participate in these [training programmes] are expected to be more highly motivated and to perform differently from those who do not, to gain stature in the newsroom, and to advance in their careers. In addition, the trained journalists are expected to share their experiences with others in the newsroom, resulting in improved performance of the news organi[s]ation at which they are employed. In this way, the actual practice of journalism should be improved.

However, due to costs and administrative difficulties, long-term impact assessments are rarely conducted to gauge if such objectives are eventually met. As Kirkpatrick (1996: 56) observes: "Evaluation becomes more difficult, complicated, and expensive as it progresses from level 1 to 4 – and more important and meaningful." In the case of assessing journalism training, Berger (2001) suggested that for a complete assessment of impact, all four levels of impact should be considered.

This chapter discusses the long-term impact of a series of seven mid-career training programmes³⁶ in environmental reporting entitled 'Environment in the News: Realisation of a Media Initiative for

³⁶ (1) Writing Environmental News, Bogota, Columbia (26-30 Mar 2001); (2) Writing Environmental News, Berlin, Germany (3-7 Dec 2001); (3) Writing Environmental News, London (10-14 June 2002); (4) Preparing for the World Summit on Sustainable Development, Grahamstown, South Africa (8-12 July 2002); (5) Writing Environmental News, Durban, South Africa (13-18 Sept 2003); (6) Telling the Story: A Media Workshop at the Delhi Summit on Sustainable Development, New Delhi, India (2-6 Feb 2004); (7) Media Briefing and Training Workshop on Environment and Health for Leading CEE Journalists – at the Fourth Environment and Health Ministerial Conference in Budapest, Budapest, Hungary (20-21 June 2004).

Sustainable Development³⁷, and provides recommendations for improvement to future training programmes in S&E issues reporting. The series of training programmes under study (hereinafter simply referred to as ‘the training’) were conducted by the *Reuters Foundation* with financial support from the *German Federal Environment Foundation* mandated to the *Bellagio Forum for Sustainable Development* (BFSD) based in Germany. The duration of each training programme ranged between three and six days, and had included presentations, exercises and field trips as part of the training process. The programmes were carried out over a period of four years between March 2001 and June 2004, and had involved eighty-nine journalists from over forty countries in South America, Eastern Europe, Africa, South Asia and South East Asia. Contents of the training programmes as provided by the organisers are listed in Appendix 1.

Considering Kirkpatrick’s (1994) four-level evaluation model, it was assumed that the evaluations conducted by the training organisers at the end of the training sessions would have provided an evaluation of immediate *reactions* and *learning*. By contrast, this impact assessment provides a longer-term evaluation, after trainees have had time to apply what they may have learned, to their jobs, allowing for the third and fourth levels of assessment in Kirkpatrick’s model. Moreover, some impacts take a long time to occur, further emphasising the importance of long-term impact assessments. Nielsen (2005: 5), for instance, observed that

A week-long course on investigative journalism might not have any immediate impact because of political pressure or limitations in the daily routines in the newsroom. However, it might have a long-term effect where some of the trainees in a changed media environment have a latent capability of making investigative journalism, or the course might have had some unexpected side effects that change the daily routine of journalism.

Long-term impact assessments may also provide useful data for informed decision making in the organisation and design of future training programmes, which in turn may lead to programmes with a higher probability of impact. Informed decision making would be particularly important considering the high costs often involved in the organisation of these training programmes. Proof of training impact also “supports arguments about the value of these training [programmes] for journalistic practice” (Becker *et al.* 2004: 2). In addition, documentation of significant programme impacts is often necessary for the purpose of justifying the need for future training and for securing the necessary funds. Pratt *et al.* (2000) noted that funding providers increasingly base their decisions to continue programme support on key programme outcomes.

In brief, although most organisers of environmental journalism training do conduct evaluations immediately after the training, this method of evaluation may be limited in that it can only provide an assessment of immediate impacts on knowledge and immediate reactions of participants towards

³⁷ Further detail about the training initiative can be obtained from the website of the Bellagio Forum for Sustainable Development: bfdserver.enovum.com/en/content/view/23/58/

the training. The limitation of such assessments appears obvious when training programmes are intended to impact on job performances. The present long-term impact assessment of a series of mid-career training programmes in environmental reporting, by contrast, provides an assessment of the extent to which trainees were able to apply what they learned to their jobs and other unintended outcomes of the training; hence, providing a more reliable assessment of the ‘educational approach’ to achieving improvements to news media communication of S&E issues.

3.2 Methods and research design

Noting earlier observations by Berger (2001), Berger (2003) and Becker *et al.* (2004) on the general lack of literature on impact assessment methodology for journalism training, in addition to the method adopted for this case study, this section also provides a brief appraisal of available methods that may be considered for conducting such impact assessments. This appraisal was instrumental for selecting a method that was most suited for the purpose of this and two other case studies of this research in Chapters 4 and 6, and may serve to inform future impact assessments of training programmes in environment journalism and other related awareness raising interventions.

Adopting Berger’s (2003) definition, ‘impact assessment’ in this study was defined as the identification and measurement where possible, of significant and lasting effects of an activity, and an analysis of its implications. Such “effects may be intentional, or unintended, and they may work to either reinforce and consolidate things – or to change and disrupt them” (*ibid*: 27). Likewise, Freeman *et al.* (2004: 58) noted that an impact assessment “asks whether the desired outcomes were attained and whether those changes included unintended [side-effects].” In designing an impact assessment for journalism training, two important research decisions would be “what to evaluate” and “how to evaluate” (Becker 2003: 1).

3.2.1 Deciding on what to evaluate in journalism training

Considering the above suggestion for evaluating training programmes based on their ‘intended’ outcomes, core items of this evaluation were based on the programme’s objectives. Mr. Samuel Shiroff (executive director of BFS) provided the objectives of the training initiative (translated from an original document in German language) as follows:

To communicate to the journalists, factually-based information on complex technical and socio-economic environmental topics and the corresponding research mechanisms. The acquisition of current and reliable information as well as the evaluation of information sources with respect to objectivity and believability is central to this goal. Moreover, participants should learn how to present less appealing as well as intellectually challenging material in a clear and attractive manner – as a fundamental requirement for the success of environmental reporting (email communication 18 November 2004).

Based on the above objectives this study established that the training had aimed to impact on trainees' knowledge on environmental and sustainable development issues; their information sourcing and evaluation skills; and, their environmental reporting skills³⁸. While the main focus of this impact assessment was to find out the extent to which these objectives were met, the assessment also included other dimensions of impact not specified in the objectives and other 'unintended' outcomes. Berger (2001) highlighted the need to evaluate impact of journalism training programmes from various angles; for instance, impacts on the individual trainee; the newsroom; the media institution; the social-political media environment; and, the trainers. In addition, Becker (2003) suggested that evaluation may also include impacts on the practice of journalism and on the society.

According to Becker (2003: 1) impact on trainees' reactions may include: satisfaction with the training; enthusiasm to cover a certain news category; or, "commitment to a particular type of journalism." Impacts on learning may include: "changes in attitudes toward something, such as a willingness to share knowledge with others"; "increased or improved knowledge of a topic"; or, "increased skills" (*ibid*: 1-2). Examples of impact on behaviour include the degree of leadership that trainees exhibit in their field and changes in the quantity and quality of stories they produce (*ibid*.). Becker suggested that quality of stories may be evaluated by examining, for example, "changes in the types of news sources used"; the "background, perspective or sophistication" of written stories; "the use of more integrative reporting" and the "number of prizes won" (*ibid*: 2).

Becker suggested that impact on the media organisation could be measured by changes in the quantity and quality of stories produced by the organisation. Impact on the organisation could also mean changes in structure; for instance, changes in 'beat' structure or changes in resource use such as the increase in the number of reporters in areas covered by the training or the seeking of further training in a similar area (*ibid*.). To evaluate the impact of the training on "the field of journalism as a whole" Becker proposed that the evaluator could measure "the amount of coverage"; "the quality of coverage"; "the level of commitment of resources to the area of the training" such as, signs of "increase in the number of media organi[s]ations with beats in a specialty covered by the training initiative"; and, "development of professional associations dealing with the topic of the

³⁸ While the title of the training initiative – *Environment in the News - Realisation of a Media Initiative for Sustainable Development* – had included the term "sustainable development" the objectives of the training had not explicitly specified enhancement of knowledge and understanding about sustainable development as an aim. For the purpose of this study, the component of the objective – "To communicate to the journalists, factually-based information on complex technical and socio-economic environmental topics..." – was, however, assumed to include information about sustainable development as well as environmental issues. The statement – "The acquisition of current and reliable information as well as the evaluation of information sources with respect to objectivity and believability is central to this goal" – within the objectives – was summarised as an objective to impact on trainee's information sourcing and evaluation skills. The section of the objectives which stated that – "...participants should learn how to present less appealing as well as intellectually challenging material in a clear and attractive manner" – was interpreted as an objective to impact on trainees' environmental reporting skills.

training” (*ibid*: 2-3). Indicators of the training’s impact on society, according to Becker, could be increases in public knowledge in the topic of the training; increased public satisfaction with the media’s performances; increased public participation “in societal decision making”; and, “improvement in [public] democratic behaviours” (*ibid*: 3).

However, impacts on the field journalism and on society as suggested by Becker (2003) and impacts on the social-political media environment as suggested by Berger (2001) may not be possible in most evaluations of journalism training, since such an evaluation is likely to require an extensive research frame and substantial expense. Other suggestions by Berger (2001) and Becker (2003) in distinguishing the various types of impact on the individual and on the media organisation were conceived to be more feasible and were taken into account in the design of this impact assessment. To some extent, impact on the newsroom and the media institution may be gauged through information gained from the trainees and their employers. In this case study, for instance, participants were asked to describe how changes in their environmental reporting as a result of the training, if any, impacted their organisation.

In addition to the question of whether the training achieved its intended objectives; Berger (2003) suggested the need to be open to other possible unintended impacts that may not have been included in the objectives of the training. Accepting Berger’s suggestion, this study, questioned other impacts not specified in the training objectives; for instance, impact on reporting frequency; impact on personal view and behaviour; impact on job satisfaction; and other unintended outcomes (both positive and negative). The evaluation also included impacts on the trainers.

3.2.2 Deciding on how to evaluate journalism training

In evaluating the effects of journalism training, it is often difficult to establish “direct cause-effect relationships between a training experience and a specific outcome” because of “the number of variables in the equation” (Berger 2003: 27). Although there are several methods available for the purpose of assessing the impact of a treatment or an intervention, such as the *pre-test-post-test* method and the use of a *control groups*, these options may not be easily applicable for the purpose of assessing journalism training. The following options and points were considered for the present case study:

(i) Control group method

For accessing training impact, Kirkpatrick (1996) recommended the use of a control group to make comparisons with the experimental group receiving the training. Berger (2003) and Becker (2003) have supported the use of control groups for the evaluation of journalism training. Becker (2003) recommended that survey data collected from trainees could be compared with data collected from

cohorts of journalists similar to the trained journalists in every possible way except for their participation in the training. To establish this cohort, Becker suggested that the evaluator could “look at applicants who were not accepted for the workshop...or who were accepted but did not attend” (*ibid*: 3). As an alternative, Becker suggested the creation of “a ‘matched-pair’ cohort made up of journalists identified by the participants as identical to them except for” participation in the training (*ibid*: 3-4). Berger (2003: 39) emphasised the usefulness of this method since “it prevents one from being too training-centred. We like to think that [the] training [made] the difference, but a comparative analysis might show that the same outcomes...occur in the control group as well.”

While admittedly the *control group design* has its advantages (as will be further detailed in the methods section of Chapter 6 where a more detailed description of its use in the impact assessment of an information campaign is provided), its application was not feasible for this case study as members of the target population were located in over forty countries. It is also suggested that the application of the *control group design* may be problematic for evaluation of journalism training in general considering the difficulty of establishing a control group with similar characteristics as the group under study. This may be especially so in the field of environment journalism where the number of journalists are few, not to mention the difficulty of engaging *control group* participants without substantial incentives.

(ii) Pre-test-post-test method

Kirkpatrick (1996: 57) recommended the “before-and-after approach”, to relate any learning that may have occurred to the training programme. In the same way, for the assessment of journalism training, Berger (2003), suggested that in identifying impact, some historical base against which it can be compared first needs to be established – the training objectives and other possible unintended impacts could then be compared with this pre-existing status. The method that Kirkpatrick (1996) and Berger (2003) have recommended is generally termed the *pre-test-post-test* method in experimental research. This method is advantageous in that it offers a method of establishing a certain degree of cause-and-effect relationship between the treatment and observed effects. However, this method was not feasible for the present case study. Although organisers of the training programme had conducted an evaluation immediately after the training, they had not collected any pre-training data. Moreover, their decision for this assessment was made after the training programmes were complete. Nevertheless, the *pre-test-post-test* method was regarded to be an appropriate option for impact assessment of training in environment reporting provided that plans for assessment are made prior to implementation of the training. The use of this method is discussed in further detail in the next case study of this research in Chapter 4.

(iii) One-group post-test-only method

After considering the above two points, the impact assessment employed for this case study was restricted to a *one-group post-test-only* method (Shadish *et al.* 2002), sometimes referred to as a *after-only* method or a *one-shot case study* (Malhotra *et al.* 2002). A weakness of this design, according to Shadish *et al.* (2002: 106), is that the lack of a pre-test “makes it difficult to know if a change has occurred, and the absence of a *no-treatment control group* makes it difficult to know what would have happened without treatment.” In addition, Malhotra *et al.* (2002: 338) noted that the internal validity of this design is weak, since it lacks control for “extraneous variables, including history, maturation, selection and mortality.” Although a weak design, it appeared to be the only method feasible considering the circumstances of the training initiative under study. Nevertheless, as detailed in the following point, in such circumstances alternative methods such as the *retrospective pre-test* method may be considered.

(iv) Post-retrospective pre-test method

Considering its limitations, the *one-group post-test-only* method employed in this case study was improved by asking participants to provide self-reports on impacts or changes by comparing the situation prior to and after the training. This method of measuring change resembles the *post-retrospective pre-test* method in which respondents are requested to recall the ‘pre-intervention status’ at the post-test (Lam and Bengo 2003). Participant’s recall of his or her status prior to the programme establishes a *retrospective pre-test* that is used as a basis for comparison at the post-test (Pratt *et al.* 2000).

In earlier studies, Howard *et al.* (1979) and Howard *et al.* (1981) found the retrospective method to have a higher level of internal validity compared to the traditional pre-test-post-test method. Pratt *et al.* (2000) detailed the many advantages of the *retrospective pre-test* method. For example, they observed that when *response shift bias*³⁹ was present, the *retrospective pre-test* method offered a more accurate method of measurement compared to the traditional *pre-test-post-test* method since it ensures that participants are rating themselves with the same frame of reference in providing their post-test and retrospective pre-test status. In addition, the authors noted that the retrospective design offers an added advantage of being an uncomplicated, convenient and time-saving method of evaluating self-reported impacts that requires a once-only administration. The *retrospective pre-test* method also offers an element of flexibility since questions can be constructed to reflect actual programme contents taking into account progress and changes that may have been made during its

³⁹ According to Pratt *et al.* (2000) *response shift bias* occurs when participants change their frame of self-reference at the post-test stage, when they come to a realisation after undergoing training, that they knew less than they had reported at the pre-test. If participants overestimate their level of knowledge and abilities at the pre-test, this causes an underestimation of impact or outcome if measured with the traditional *pre-test-post-test* method.

implementation to fit with participants' responses and needs (*ibid.*). Moreover, the retrospective method allows assessment of unexpected outcomes that would be impossible to measure in a prospective approach (*ibid.*). However, the retrospective method retains some limitations that need to be acknowledged such as *demand characteristics* and memory-related constraints that may influence recall (*ibid.*). To minimise memory-related biases, questions need to clearly define the time period within which items need to be recalled (*ibid.*). In addition, questions also need to be formulated in a manner that facilitates recall (*ibid.*). Self-reports are estimations and hence have the potential for other biases; for example, participants' voluntary improvements to skills, other interfering events and maturation effects (*ibid.*).

(v) Threats to internal validity – history and maturation effects

Two threats to internal validity noted to be highly likely in long-term impact assessments are *history effect* and *maturation effect*. Shadish *et al.* (2002) noted that *history effect* is nearly always present in the *one-group post-test-only* design. *History effect* results from events that may occur between treatment and post-test, that could cause a change in the dependent variable even in the absence of the treatment (*ibid.*). In addition, *maturation effect* was also noted as a possibility in this study considering that the time frame between treatment and evaluation ranged between three years and nine months. *Maturation effect* result from “natural changes that would occur even in the absence of treatment”; for example, increases in age, wisdom and experience (*ibid.*: 57). In this study, *history effect* and *maturation effect* were gauged by asking respondents to provide other factors, besides the training, that had contributed towards the impacts that they reported. This method of enquiry allows for an assessment that differentiates between impact that resulted solely because of the training, and impact that resulted from a combination of factors, one of which may be the training. It was noted that this method also allows the identification of other indirect impacts. For example, the training may have triggered an interest in a specific environmental topic, which may have lead to enquiries and reading into the topic, and consequently an increase in knowledge. Garnered through in-depth personal interviews, this method may generate substantial qualitative data on long-term impacts.

(vi) Minimising subjective data

To minimise subjective and speculative answers, Berger (2003) and Becker *et al.* (2004) suggested that respondents should be requested to substantiate self-reported impacts with concrete examples. In addition, Berger (2003) recommended that data be collected from both trainees and their employers, to avoid overly subjective data, as would be the case if the assessment relied solely on self-reports by trainees. Berger reported that an impact assessment of a training programme conducted by the *NSJ Training Centre* in Mozambique that had used this method revealed that trainees gave higher ratings for their own improvements compared to their employers.

In an earlier evaluation of a journalism training programme, although Becker *et al.* (2004) considered the opinions of reporters as well as their editors, they indicated that caution was required in accepting the results of such an evaluation at face value. They suggested that since the journalists' time was invested in attending the training, it may be difficult for the journalists or their editors to say that it was a useless investment. In view of this, Becker *et al.* suggested two factors that could support result validity. Firstly, if a considerable amount of time is allowed to elapse between the training and the evaluation, this could reduce the sense of commitment among respondents, and consequently increase the likelihood of a more realistic report of training effects. Secondly, journalists and editors could be asked to substantiate the impacts they report with specific examples. They suggested that such a probing method prevents thoughtless reporting on impacts. Even so, they regarded this method to be limited and maintained that convincing evidence of training impact can only be generated by examining the actual work produced.

Considering Berger's (2003) suggestion for minimising subjective data, supervisors of participants in this study were contacted to gauge their view about the training's impacts. However, it was reasoned that concrete examples of stories written as suggested by Berger (2003) and Becker *et al.* (2004) may not serve as an accurate evaluation of improvement in writing skills, unless other factors that may have influenced output – such as changes and corrections that may have occurred in the editing process and journalists' own improvement initiatives after the training – are taken into account. Instead, trainees in this study were requested to substantiate self-reports with titles of stories published, and to describe aspects of improvement to their reporting, if any.

3.2.3 Limitations of this study

One problem faced in this evaluation research was locating current contact details of participants and encouraging responses to the questionnaire. To ensure better response rates, it is suggested that participants accepted for journalism training programmes are requested to commit to a long-term evaluation plan. For instance, participants could be made aware that they would be contacted again after a period of time for an impact assessment. Hence, they should be encouraged to keep organisers informed of changes to their contact details.

Another limitation of this evaluation was that seven training programmes were lumped together as a single training initiative. This was inevitable, as the number of respondents in each training programme was small, ranging from one to a maximum of ten in each. Therefore, it was not possible to investigate impact taking into account possible differences in the core messages provided in the training programmes, and possible differences in the teaching approaches used.

In addition, variation in the post-training period of the seven training programmes under study which ranged between six and forty-five months was identified to be a situational variable that

could have an effect on reported impacts. Berger (2001) found that the impact of training requires time before full effects can be expected. Berger observed that trainees who completed a course two years prior to evaluation reported a greater impact compared to those who completed the course six months prior to evaluation. When measuring impact of training on behaviour, Robinson and Robinson (1989: 229) suggested: “If you measure results too soon, you may be measuring the decline that appears immediately after the training, when people are trying to apply the learning; you will not be measuring what will be the actual norm over time”. Similarly, Becker *et al.* (2004) suggested that sufficient post-training time would be required for a realistic report of impact by trainees. In this study, although a comparative analysis was not possible for each training programme due to differences in the number of respondents in each, a comparison was made between two programmes – the training programme held in Berlin on December 2001 (36 months post-training) and the training programme in Budapest on June 2004 (6 months post-training) – both of which consisted a comparable number of respondents.

3.2.4 Target population

The key target population under study were journalists, reporters, correspondents, and editors who underwent the mid-career training programme, *Environment in the News*, between March 2001 and June 2004. The programme had included eighty-nine participants selected from over forty countries in South America, Eastern Europe, Africa, South Asia and South East Asia. This study hence generally represents environment reporters from developing countries.

Employers were a secondary target population. A questionnaire that sought the impact of the training programme from the employers’ perspective was sent to twenty-three supervisors of the trainees. However, due to poor a response rate from employers, a comparative analysis of impact as reported by the trainee and employer was possible only in a single case. A third target population were the four main trainers who facilitated the training programmes.

3.2.5 Evaluation instruments

The evaluation instruments comprised of self-administered, semi-structured questionnaires administered through email. This method was regarded as the most feasible considering that trainees, their employers, and the trainers were located in various countries, making personal interviews not practical, and telephone interviews costly.

The questionnaire for trainees (Appendix 2) was designed to obtain both quantitative and qualitative data on the following variables:

1. Understanding of the term ‘sustainable development’.
2. Knowledge of environmental issues.

3. Environmental reporting skills.
4. Information sourcing and evaluation skills.

The research also measured other impacts not mentioned in the objectives:

5. Depth in reporting.
6. Reporting frequency.
7. Environmental views and behaviour.
8. Motivation to specialise in environmental reporting.
9. Level of job satisfaction.

In addition, the research questioned other aspects:

10. The practicability of the reporting style taught.
11. The reception of employers and co-workers.
12. Other unintended impacts.
13. Impacts on the newsroom.

Trainees were also asked to provide background details relating to the following identified *participant variables*:

1. Employment position.
2. Level of education.
3. Number of years of professional experience in journalism.
4. Prior training or education in environmental reporting.
5. Area of specialisation.
6. Level of proficiency in English.

The questionnaire for employers (Appendix 3) consisted of mainly open-ended questions that sought the impact of the training programme on the trainee, from the employers' perspective.

A third questionnaire was designed to gauge impacts on trainers (Appendix 4). This questionnaire also served in gaining information on specific aspects of the training programme. In addition, trainers were asked to provide suggestions for improvement to future training programmes in environmental reporting.

3.2.6 Pre-testing the evaluation instrument

In the pre-testing process, the questionnaire for trainees was sent to thirty-two individuals⁴⁰, many of whom had previously undergone mid-career journalism training. Nine responses were received.

Fowler (1984: 105) suggested that self-administered questionnaires are best pre-tested through personal discussions with potential respondents. In this study, however, eight of the nine who responded were located outside of New Zealand; hence, a face-to-face discussion was not feasible. An e-mail discussion was instead initiated with pre-test participants. Adopting Fowler's (1984) suggestions, pre-test participants were (1) informed that the objective of the pre-test was to ensure clarity of questions in order to accomplish the objectives of the questionnaire; (2) requested to fill the questionnaire, point out unclear or difficult questions and confirm if instructions provided were easy to understand; and, (3) asked to provide further clarification in cases where answers were unclear. In addition, participants were requested to provide suggestions for improvements and rewording of sentences. Participants were also asked to provide an estimate of time needed to complete the questionnaire.

The above process helped identify unclear and difficult questions as well as problems in questionnaire format. Two respondents provided general comments. Seven filled out the questionnaire, which allowed the assessment of misinterpretations of questions. Misinterpretations were especially evident among non-native English speakers. Considering that the majority of the target population under study were non-native English speakers, an attempt was made to further simplify the questionnaire. A few pre-test respondents pointed out typos, repetitive questions, and possible misleading questions. They also provided recommendations for rewording sentences and commented on the flow of questions. It was observed that a journalist who had previously participated in a training programme in environmental reporting (*Making Green News*) provided the most enthusiastic response and filled out the questionnaire completely. Although journalists who had undergone a training on *Good Urban Governance* were asked to respond to the questions as if it related to that training programme, they were not able to relate to some of the questions. It is therefore recommended that pre-testing be conducted with a group as similar as possible to the target population.

⁴⁰ These individuals comprised of twenty-eight journalists who had undergone a workshop programme on Good Urban Governance (17-20 August 2003), organised by the United Nations Development Programme in Malaysia; one reporter from a Malaysian television channel (NTV7) who had undergone a training programme on environmental reporting titled *Making Green News* that was co-organised by the World Wide Fund for Nature, Malaysia; a trainer who was part of the training team for *Making Green News*; an editor of Inter Press Service who had undergone a Reuters organised training in 2001; and, a reporter of The Press, New Zealand who had not undergone any training programmes.

As questionnaire for employers and trainers largely extracted wordings used in the questionnaire for trainees, these research instruments were not pre-tested.

3.2.7 Drawbacks of the self-administered questionnaire method and measures taken

Gillham (2000) pointed out that a fundamental problem with questionnaires is that they are often completed carelessly and in a hurry, resulting in problems with data quality. In this study, it was reasoned that an explanation of the importance of the research could encourage respondents to fill the questionnaire more completely and accurately. A cover letter that accompanied the questionnaire indicated the relevance of the research to the media's role in conveying environmental and sustainable development messages as well as the importance of the research for improvements to future training programmes. The letter also noted that the evaluation would constitute a significant part of the researcher's Ph.D. dissertation and was hence of personal importance to the researcher.

Another disadvantage of the questionnaire according to Gillham (2000) is that they are known to have a low response rate, unless when dealing with a 'captive' sample. In order to 'captivate' respondents in this study, they were informed, in the cover letter, that BFS (the sponsor and co-organiser of their training) had awarded the researcher a fellowship to conduct a long-term impact assessment. It was assumed that this information would increase feelings of obligation among participants to complete the questionnaire – in this sense, participants may be regarded as 'captivated.' Then again, this may be interpreted as *implied coercion*; Wimmer and Dominick (2000: 69) cautioned that "a researcher should not attempt to induce subjects to participate by misrepresenting the organisation sponsoring the research or by exaggerating its purpose or importance." It is argued that in the case of this research, BFS's sponsorship was a fact (not a misrepresentation). While its purpose and importance were emphasised in the cover letter, these were not exaggerated. In addition, to minimise the possibility of *implied coercion*, participants were informed in the cover letter and an enclosed information sheet that their participation was voluntary.

Evaluation apprehension, as described by Rosenberg (1969) is respondents' fear of being tested or measured and their desire to receive a positive appraisal from the researcher. *Evaluation apprehension* may affect data quality and is therefore a threat to internal validity (Wimmer and Dominick 2000). To minimise *evaluation apprehension*, participants in this research were assured that the questionnaire was not intended to evaluate individual abilities, accomplishments, or progress, but rather designed to evaluate the impact of the training as a whole.

3.2.8 Administration of the questionnaires and follow-up

In the process of contacting participants, in cases where e-mail addresses were no longer valid, an attempt was made to contact them at their organisations via fax and telephone. In many cases, it was found that trainees had left their organisations for jobs in other media organisations. In some cases, forwarding addresses and phone numbers were obtained from their previous organisations. Time differences between New Zealand and these other countries and language disparities made this an arduous task. Nevertheless, eventually, eighty-one of the eighty-nine participants were contacted. They were sent the questionnaire, an explanatory cover letter, and an information sheet via e-mail between 9 and 20 December 2004.

Two trainees declined participation. Although they were encouraged by letting them know that even brief responses would be appreciated, in adherence to the principle of voluntary participation, subsequent reminders were not sent to these two individuals. In all other cases, non-responses were followed up with three e-mail reminders from the researcher, and one from Mr. Samuel Shiroff (Executive Director of BFSD). This was followed with phone calls to ensure that non-responses were not due to non-receipt of the emails as a result of spam-filters.

Without delay, all respondents were sent a letter of appreciation for their participation, as soon as responses were received. The letter thanked respondents for the time spent on the questionnaire, and emphasised the significance of their participation in the research. They were also informed that they may be contacted again if further clarification was needed on their answers.

In all cases, respondents misunderstood questions, provided unclear answers or failed to answer some sections of the questionnaire. Hence, they were sent a second questionnaire containing only the uncompleted questions together with a note on clarifications sought. In some cases, misinterpreted questions were re-phrased to facilitate understanding. In cases where only brief answers were provided, respondents were encouraged to elaborate further. One reminder was sent to encourage respondents to complete their responses; seventeen provided the clarifications sought.

In a few cases, respondents were contacted again to gain their consent for the use of personal or sensitive information. Respondents were reassured of confidentiality and anonymity. In all cases, respondents agreed to have these information published.

Email addresses of employers were obtained from twenty-three respondents. Others were not able to provide such contact details for various reasons. Questionnaires were sent to all twenty-three employers between 2 January 2005 and 28 February 2005 and this was followed up with one reminder.

Questionnaire addressed to trainers were sent between 8 and 14 December 2004 and followed up with two reminders.

3.3 Results and Discussion

3.3.1 Response rates

Forty-one responses were received from the trainees, generating a response rate of 51%. Only two responses were received from employers – a response rate of 9%. Responses were received from all four trainers; three responded with detailed answers, while one responded with brief answers due to lack of time.

3.3.2 Trainees' backgrounds

Trainees in this study represented a variety of media organisations as illustrated in Figure 3-1. Four worked for more than one media type.

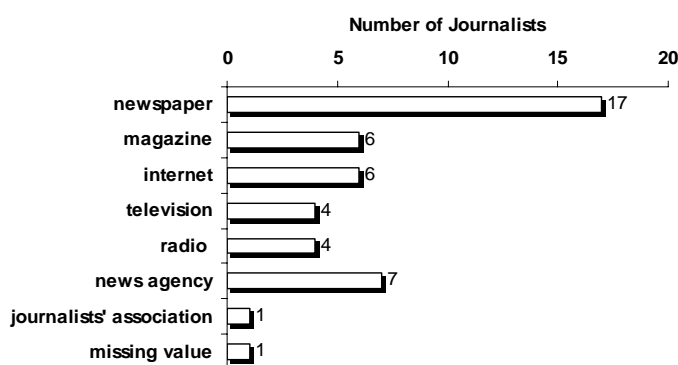


Figure 3-1 Type of media organisations represented by trainees

Many of these media organisations were private businesses (44%), some were government-owned (23%), while others were either independent, community-owned, or NGO-owned (see Figure 3-2). A majority (73%) provided national coverage, while a few others provided regional or global coverage (see Figure 3-3). Twenty-three (56%) of these organisations used English as the main language or as one of the main languages, while others used their respective national languages.

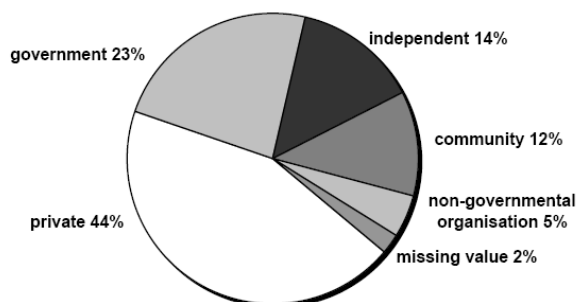


Figure 3-2 Ownership of media organisations represented by trainees

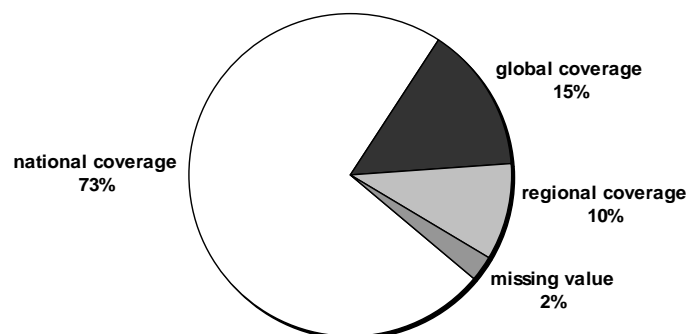


Figure 3-3 Coverage area of media organisations represented by trainees

Respondents comprised of twenty-five women (61%) and sixteen men (39%), and were from twenty-one⁴¹ different countries.

Twenty-four (59%) held employee positions such as reporter, journalist, writer, stringer, correspondent and delegate, while seventeen (41%) held decision-maker positions such as editors or executive directors. All respondents had tertiary level qualifications, and had between four and twenty-one years journalism experience as detailed in Figure 3-4.

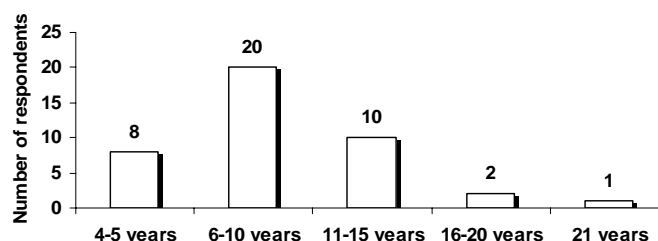


Figure 3-4 Trainees' years of journalism experience

Twenty-six (63%) had not been exposed to any prior training in environmental reporting, while fifteen (37%) had participated in other training programmes or workshops in environmental reporting. In addition, two indicated prior education in environmental studies and ecology respectively.

As illustrated in Figure 3-5, thirteen (32%) indicated 'environment' or 'sustainable development' as their sole area or focus area of reporting. Ten (24%) indicated that 'environment' was one area they report, in addition to other areas such as science, information technology, health, social policy, politics, culture, and education. Fourteen (34%) specialised in an area other than the environment. Two (5%) were general reporters.

⁴¹ Albania, Brazil, Bulgaria, Ghana, India, Lebanon, Malaysia, Macedonia, Malawi, Nigeria, Russia, Romania, Serbia & Montenegro, Slovenia, Turkey, Sierra Leone, South Africa, Uganda, United Arab Emirates, Yugoslavia and Zambia

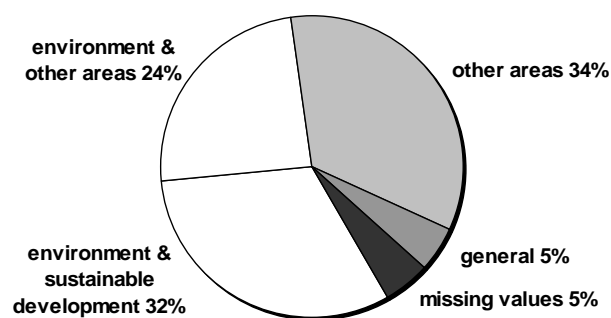


Figure 3-5 Respondents' area of specialisation in reporting

While English was a first language for five participants (12%), thirty-six (88%) confirmed that it was not. When the latter were asked to rate their level of English, twenty-one rated it to be excellent, while the fourteen others rated it as average.

3.3.3 General aspects of the training programme

(i) Medium of Instruction

Medium of instruction was noted to be an important factor in this assessment considering that while participants were from countries where English was not a first language, with the exception of the training programme in Bogotá, Colombia which was conducted in Spanish, all others were conducted in English. Nevertheless, a majority (85%) indicated that they found the medium used to be effective. Three commented that the trainers' clear communication ensured that language did not become an obstacle.

One pointed out that the use of English as a medium of instruction contributed to the effectiveness of the training as it eliminated the need for translation, which would have taken up training time. However, a few respondents with English as a first language observed that language may have been a problem for non-native English speakers. One for example observed:

[Language may have been a problem] for others from non-English speaking countries. They may not have been able to follow and thus may have compromised their understanding of the issues discussed. If they don't understand then they may not be able to take up the issues back home.

Similarly, another respondent observed that half of the participants in her programme were not able to speak English. She said: "I wondered at that time how they could benefit from the course if they didn't understand what the trainers were talking about."

While international training programmes may need to be conducted in a lingua franca language such as English, where possible training should be conducted in local languages. One respondent in this study, for example, remarked that she found it difficult to write articles in English during the

training. Another expressed difficulty conceptualising the term ‘sustainable development’ in English. In addition, she said that the term lacked definition in her native language. Therefore, training conducted in local languages may facilitate application of terms and concepts learned to actual reporting.

(ii) Length of the training programmes

Although many commented on the intensiveness of the programme, twenty (49%) indicated that the length of the programme was adequate. Fifteen (37%), in contrast, indicated that it was too short. Three believed that a longer programme would have been more effective as it would have allowed more time for discussions, practical work and to cover more aspects of reporting.

(iii) Level of interaction between trainer and trainee

To gauge the level of trainer-trainee interaction, trainees were asked to select from a list of three interaction types – classroom; one-on-one; and, social – those that they experienced during the training. In addition, they were asked to indicate which type of interaction they found to be most effective.

The trainers indicated that they distributed their time in all three types of interaction with the largest portion of time spent in classroom interactions. Two believed that combining the three interaction types would be most effective for the purpose of training. The other two indicated classroom interactions to be the most effective.

Twenty-seven trainees (66%) indicated that they experienced all three types of interaction. Ten (24%) said that they experienced between one and two interaction types. As illustrated in Figure 3-6, eleven believed that a combination of all three interaction types to be the most effective approach. One pointed out that while classroom interactions were suitable for conducting the training, the social interactions allowed the trainees to get to know trainers’ backgrounds and experiences which added “extra meaning and content” to the courses.

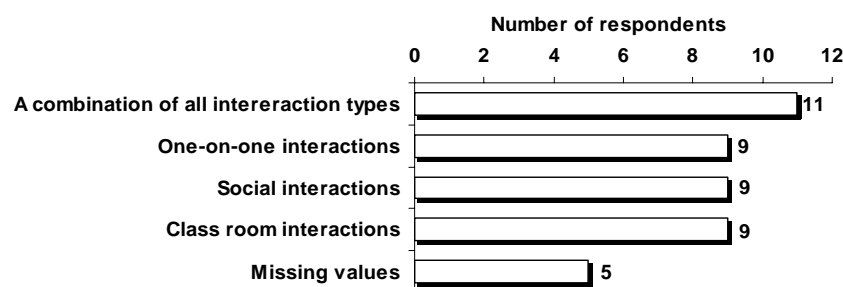


Figure 3-6 Interaction type perceived to be most effective by trainees

Although views about the effectiveness of interaction types were varied in this study, a combination of interaction types could be the best approach for journalism training programmes. Becker (1999) reported that two characteristics that increased the impact of the *Knight International Press Fellowship Program* were the amount of time spent with the participants and the variety of interaction types between the fellows and participants of the programme, such as, meeting socially outside the sessions; accompanying them on assignments; and, one-on-one talks.

3.3.4 Motivation to attend the training programme

In an evaluation of the impact and effectiveness of the *Knight International Press Fellowship Program*, Becker (1999) reported findings that individuals who volunteered participation in the programme were more open to what was taught compared to those who were requested by supervisors to attend. In this study, eighty-four percent (34) of respondents indicated that they volunteered participation. Only one said that her supervisor had requested her to attend the training. A comparative assessment between volunteers and non-volunteers was thus not possible in this study.

To determine participants' motivations to join the training, they were asked if the location of the training programme and/or the opportunity to travel had been a motivating factor. Twenty-two (54%) said that it had. However, seven clarified that it was not the sole or most important motivating factor.

When participants were asked to indicate what prompted them to partake in the training, they provided a variety of reasons which included – the invitation from the organisers; recommendations by a third party; the opportunity to gain from Reuters' expertise; the opportunity for career development; and, the opportunity to strengthen knowledge on environmental issues and environmental reporting. Considering these remarks and the fact that fifteen (36%) attended the training on unpaid time off work, it was noted that although the travel experience may have been a motivating factor for some, the opportunity for knowledge enhancement was also a significant motivating factor.

3.3.5 Impact on understanding of the term 'sustainable development'

To find out impact of the training on understanding of the term 'sustainable development', trainees were first asked to provide their opinion about the term by selecting from a list of six descriptors – *complex; simple; lacking definition; clearly defined; confusing; and, clear and easy to understand*. They were then asked to illustrate their understanding of the term in their own words and to indicate the various factors that contributed to that understanding. To facilitate recall of the 'pre-intervention status' (hence establishing a *retrospective pre-test*) they were asked to confirm if they

had been familiar with the term prior to the training. A subsequent question then asked how the training impacted their understanding.

As Figure 3-7 shows, sixteen (39%) indicated that they found the term ‘sustainable development’ to be complex.

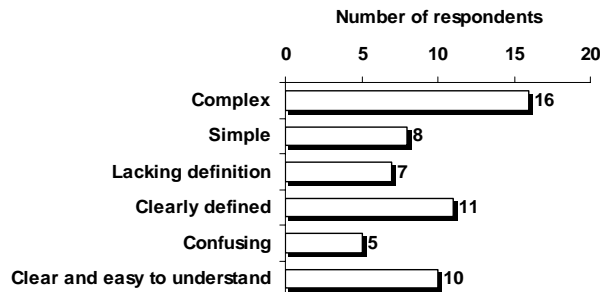


Figure 3-7 Trainees’ view about the term ‘sustainable development’

Nevertheless, almost all (92%) were able to provide a reasonable definition of the term. Twelve (29%) were able to provide an understanding that resembled the sustainable development definition provided by the Brundtland Commission⁴². The various factors that contributed to their understanding included: life experiences; work experiences in the environmental field; educational backgrounds; personal interest in the subject; reading; coverage by other media; discussions with environmental experts; and, attending conferences, courses and training programmes. Five specified the training programme under study as a contributing factor.

As illustrated in Figure 3-8, six indicated that they did not have a pre-existing understanding of ‘sustainable development’ prior to the training and reported that the training provided some knowledge about the term, which enhanced their understanding.

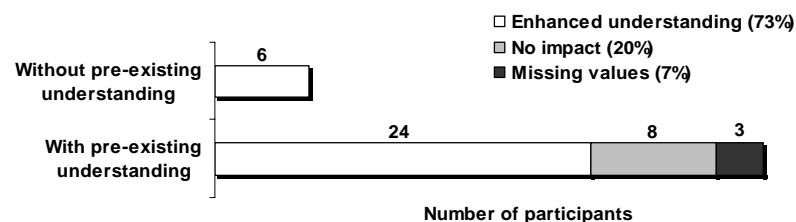


Figure 3-8 Impact of training on trainees’ understanding of ‘sustainable development’

Thirty-five, on the other hand, indicated that did have a pre-existing understanding of the term. Eight from this group indicated that the training did not have an impact on their understanding. Two commented that since they already had a clear understanding of the term, the training did not have an effect on them. Others clarified that the training had not aimed to improve their

⁴² That is, “development that meets the needs of the present generation without compromising the ability of future generations to meet their needs” (WCED 1987: 43).

understanding of sustainable development, but had instead aimed to provide better reporting skills. One said: “The point of the training, in my opinion, was not to learn what sustainable development means, but to learn to write better.” Another explained that the trainers were professional journalists and not environmental experts. Nevertheless, twenty-four (59%) from this group indicated that the training enhanced their understanding. According to these respondents, the training clarified the term; showed the broad scope of its meaning; demonstrated the different perspectives surrounding the term; provided examples of its application; and, provided an effective way of explaining the term to the public. Chi-square tests found no differences in reported impacts on understanding of sustainable development for the following identified participant variables: employment position ($\chi^2(1, n=38)=0$, $p=1.000$); years of journalism experience ($\chi^2(3, n=38)=2.687$, $p=0.442$); prior training in environmental reporting ($\chi^2(1, n=38)=0$, $p=1.000$); area of specialisation ($\chi^2(1, n=36)=0.253$, $p=0.615$); and, level of proficiency in English ($\chi^2(1, n=33)=2.309$, $p=0.129$).

Although most trainees were already familiar with the term sustainable development, a majority (73%) reported improvements to their understanding. Considering the lack of a specific session on sustainable development in the training, it was reasoned that trainees may have gained their understanding from the contents of the training in a general sense.

3.3.6 Training environment reporters: A need to provide a deep understanding of sustainability

When asked how ‘sustainable development’ was defined within the training programme, one trainer said that it was left to participants to define the term in any way they wanted. He explained:

Participants were encouraged to put forward their own interpretations and views and to discuss them within the group. If I recall correctly, discussion on “sustainability” tended to be more on the degree of sustainability rather than a black-and-white sustainable vs. non-sustainable.

Another trainer explained that sustainable development was defined as: “Any long-term programmes or processes that rely on renewable energy resources”. A third trainer indicated that the definition of sustainable development used was “in line with the UN definition adapted at the World Summit for Sustainable Development, 2002”.

Based on the above feedback from the trainers, it was noted that the term ‘sustainable development’ may not have been clearly defined within the training programmes. It was observed that although the contents of the training included various environmental topics, it had not included a specific session devoted solely for the discussion of the term ‘sustainable development’.

As reported in Section 3.3.5, although a large percentage of trainees (73%) indicated an increase in understanding of sustainable development as a result of attending the training, many found the term to be complex. Valenti and Cragge (2003) observed that although media coverage of sustainability

increased over the past decade, for the media, sustainability still remained a concept that lacked an acceptable and consistent definition. This, they say, resulted in media scepticism towards the concept and hence an emphasis on the political conflicts surrounding sustainability issues, rather than information that could lead to better understanding of the issues. Valenti and Cragge observed that because journalists lacked clear understanding of sustainability they tended to focus on who was delivering the message, while leaving out facts about how sustainability might be achieved.

As shown in Figure 3-9, a majority of sixty-six percent (27) of journalists in this study indicated that understanding of the term had in fact affected their reporting of related issues in the past.

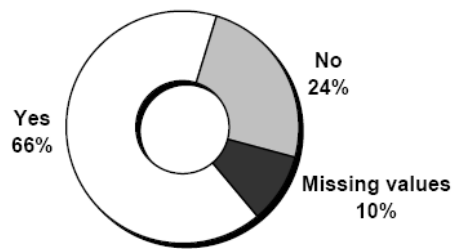


Figure 3-9 Response to the question: Has your understanding of sustainable development affected your reporting of this subject in the past?

Lack of knowledge or understanding of the term prevented reporting on the subject. Increase in understanding, conversely, increased the frequency and quality of their reporting. One reporter explained that earlier he had covered sustainable development issues only “tangentially” because of his lack of knowledge.

This finding suggests that journalists could benefit from a session in the training solely dedicated to provide a deeper understanding of the concept of sustainability. In addition, as detailed in Chapter 1 of this thesis, sustainability remains a contested concept that is variably interpreted, which adds to the difficulty of reporting the topic. Although journalists may bring with them varied views and knowledge of the term, the sharing of which may enhance the group’s understanding as a whole, journalists also need to be provided with information about current debates and controversies surrounding the term, and suggestions on how its complexities could be addressed in reporting.

3.3.7 Impact on knowledge about environmental issues

To evaluate the training’s impact on knowledge about environmental issues, in an open-ended question, participants were asked to identify factors that have contributed to their overall knowledge on environmental issues. A subsequent question asked participants to indicate how the training impacted on their overall knowledge of environmental issues.

Eleven (27%) specifically identified the training under study as one of several contributing factors to their overall knowledge of environmental issues. Other contributing factors included: formal education; reading on the topics; discussions with experts, scientists, researchers and activists; living in touch with nature; a personal interest in the topic; information gained from other media; work experience in the environmental field; the rising environmental problems; and, attending courses, training, seminars, and conferences. As Figure 3-10 shows, a majority of seventy-three percent (30) indicated that the training did have a positive impact on their overall knowledge about environmental issues.

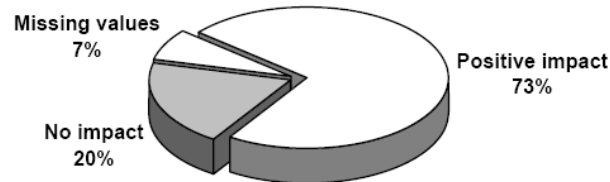


Figure 3-10 Impact of training on trainees' knowledge about environmental issues

Eight specified that the training provided new knowledge and new insights into environmental issues. Another twelve indicated that the training widened and/or deepened their understanding of issues. One said that the training gave him an international perspective of the issues. Eight (20%), however, indicated no impact on their environmental knowledge. One explained that he already had sufficient knowledge about environmental issues prior to the training. Others said that the training mainly impacted on their reporting and writing skills.

Chi-square tests showed no differences in reported impacts on knowledge about environmental issues for the following identified participant variables: employment position ($\chi^2(1, n=38)=1.640$, $p=0.200$); years of journalism experience ($\chi^2(3, n=38)=1.393$, $p=0.707$); prior training in environmental reporting ($\chi^2(1, n=38)=0.078$, $p=0.781$); area of specialisation ($\chi^2(1, n=36)=0$, $p=1.000$); and level of proficiency in English ($\chi^2(1, n=33)=0$, $p=1.000$).

Participants were also asked to indicate if their understanding of environmental issues had affected their reporting in the past. As Figure 3-11 shows, a majority of thirty (73%) indicated that it had.

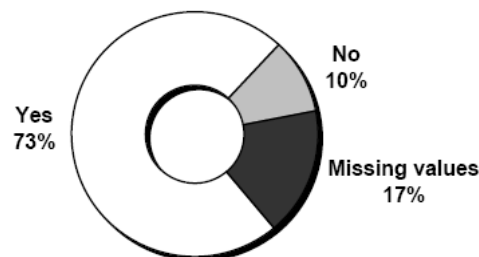


Figure 3-11 Responses to the question: Has your understanding of environmental issues affected your reporting in the past?

One explained that earlier without adequate knowledge, he was not quite sure what issues to report. Another said: “Knowing more, I dared to do more.” A third emphasised the necessity for reporters to build on their knowledge about environment issues, as this reduces mistakes in reporting, which in turn ensures public confidence in the reported news. Illustrating an indirect impact, one said that increase in knowledge as a result of the training subsequently enhanced her interest in reporting environmental issues.

The above findings show that the training, in various ways, enhanced participants’ knowledge about environmental issues. Understanding of environmental issues, as a majority of respondents indicated, does have an effect on reporting. These findings also suggest that increase in knowledge may increase reporters’ interest in the issues. It therefore appears that increase in environmental knowledge among reporters may subsequently contribute to increase in the quality of environmental news coverage. This, in turn, lends evidence to Scardamalia and Bereiter’s (2003; 2006) *knowledge building theory*, and supports the need for future training programmes with components that aim to build journalists’ knowledge about environmental issues.

3.3.8 Impact on environmental reporting skills

To gauge impact of the training on reporting skills, participants were first prompted to recall their ‘pre-intervention status’ by providing titles of stories covered before the training. They were then asked to rate their abilities to report environmental and sustainable development issues after attending the training. To substantiate self-reports, participants were asked to provide titles of stories, events, and issues that they covered after the training and to describe how these differed from the stories they had covered before the training.

As Figure 3-12 shows, a majority of thirty-one (76%) affirmed that their environmental reporting skills improved after the training. Three (7%), however, said that the training had little impact on their reporting skills. Only one (2%) indicated no impact at all.

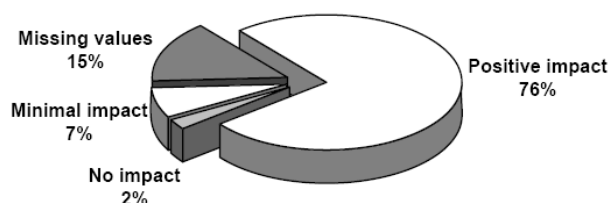


Figure 3-12 Impact of training on environmental reporting skills

In describing how their reporting skills improved after the training, eleven indicated the following improvements:

1. ability to distinguish between important and unimportant factors that can have an influence on the environment, when reporting;

2. having a clearer strategy while reporting;
3. improved interviewing skills that led to better stories;
4. ability to produce well-researched stories that gets to the point fast and have an effect on the reader;
5. ability to report on a wider range of issues;
6. ability to write stories with broader perspectives;
7. ability to write stories that provides a critical analysis;
8. ability to write in-depth stories supported with scientific information;
9. ability to write stories derived from valid sources;
10. ability to write stories that emphasise the most important issues; and
11. ability to write stories that were more ‘professional’.

Chi-square tests performed found no differences in impacts on reporting skills for the following identified participant variables: employment position ($\chi^2(2,n=35)=3.011$, $p=0.222$); years of journalism experience ($\chi^2(6,n=35)=5.871$, $p=0.438$); prior training in environmental reporting ($\chi^2(2,n=35)=3.651$, $p=0.161$); area of specialisation ($\chi^2(2,n=33)=2.276$, $p=0.320$); and, level of proficiency in English ($\chi^2(1,n=31)=2.788$, $p=0.095$).

In addition, trainees were asked if they applied any techniques or approaches they learned from the training to their work (the third level in Kirkpatrick’s (1994) evaluation model). As shown in Figure 3-13, a majority of thirty (73%) indicated that they did.

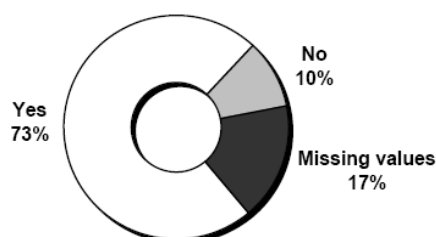


Figure 3-13 Response to the question: Have you applied any techniques or approaches you learned from the Reuters-BFSD training programme to your work?

These respondents were asked to substantiate this self-reported impact with examples of what was learned and how these were applied to work. Some described how their work benefited from improved interview techniques; improved writing skills; skills in tracing environmental information; and, increased use of the internet as an information source. They were hence able to report in a clearer format – using simpler words but in a more interesting manner. They used verifiable facts; avoided jargon; and, explained terms more clearly. One said that he developed an ability to “jazz up” dry scientific information. Other reporting approaches and techniques from the training that trainees applied to their work included: providing all angles of the story; providing the space for opinions from all concerned parties; presenting information in a well organised manner;

distinguishing important facts that impacts the environment; using a critical reporting approach; providing global and regional perspectives; providing in-depth scientific information; researching environmental issues from a variety of angles; reporting more objectively; and, reporting in a balanced manner.

Adding further evidence to impact of the training on reporting skills, in another section of the questionnaire, twelve (29%) identified improvements to their reporting skills and journalism standards as the most important and biggest impact that the training had on them.

Four (10%), however, indicated that they were not able to apply what they learned from the training to their work. One explained that this was largely due to her editor's lack of interest and lack of access to information.

The above findings show that a majority of trainees experienced improvements to their reporting skills as a result of the training and a majority were also able to put into practice what they learned. Considering that journalists in developing countries may sometimes lack background education in journalism, as Friedman and Friedman (1989) have observed in the case of journalists in Asia, training programmes in environmental reporting targeting journalists in developing countries in particular are likely to be beneficial if they include sessions on reporting skills.

3.3.9 Impact on information sourcing and evaluation skills

To gauge how information sourcing and evaluation were addressed within the training, trainers were asked how source selection and evaluation of information “with respect to objectivity and believability” (as specified in the objectives of the training) were presented in the training programme. One trainer indicated that “exercise templates” provided by Reuters Foundation and the trainers’ personal experiences were employed to build on trainees’ information sourcing and evaluation skills. In addition, sources suggested by trainees were tested for objectivity. Another explained that although the materials of the training programmes were presented as simulations, they were in fact based on actual situations and events, hence providing realistic experiences in evaluating information. The third noted that he urged participants to be sceptical rather than cynical. He said that the training had also emphasised the seeking of peer-reviewed information when dealing with scientific information.

Trainees were asked to indicate how they sourced information, identify sources that they usually used when reporting environmental issues, and indicate how they evaluated these sources. They were then asked to indicate if the training had an impact on how they sourced and evaluated information; and to describe the changes they experienced. They were also asked to provide other factors that may have contributed to their skills.

A majority of seventy-six percent (31) indicated that they obtained information from a variety of sources. Seven said that they attempted to obtain different viewpoints to a story. Nine reported that they established a network of contacts for this purpose. One detailed that she evaluated her sources based on integrity, accuracy, reliability and accessibility, while another noted that he counterchecked the information obtained with other parties.

The reliance on environmental groups as an information source was high, as Figure 3-14 illustrates. A vast majority of ninety-five percent (39) indicated this group as an information source they used. In the case of three respondents, environmental groups were the only information source they relied on when reporting environmental issues. In contrast to findings in this study, Lacy and Coulson (2000) observed that in American metropolitan dailies, only a small fraction of the news sources comprised of environmentalists. Several respondents in this study said that they relied on environmental groups because of their expertise, their enthusiasm, and their ability to provide critical and clear information. Even so, four commented that environmentalists could at the same time be biased, manipulative, idealistic, and unrealistic, and that they had a tendency to exaggerate. Similar to the observation in this research, Goodell and Sandman (1973) reported that although conservation groups were a popular information source among reporters in the U.S., there was a tendency among reporters to distrust and discount claims made by conservationists.

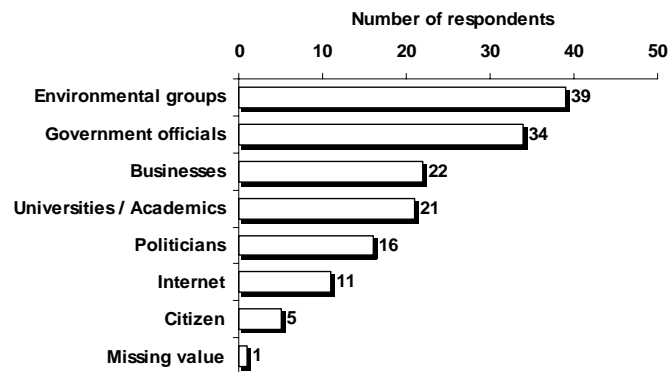


Figure 3-14 Information sources used by respondents when reporting environmental issues

The second most relied on source was government officials – eighty-three percent (34) indicated a reliance on this source. One said that he found government sources to be easily accessible. Similar to observations in this study, Lacy and Coulson (2000) found that environment reporters relied heavily on governmental sources followed by businesses. Friedman and Friedman (1989) reported that the tendency among journalists to rely on government sources in environmental reporting was due to their easy availability and perceived credibility. This tendency according to Friedman and Friedman is especially so in Asian countries where other information sources are not readily available. They suggested that the heavy reliance on government press releases gives the government the upper hand in information control (*ibid.*). However, nine respondents (22%) in this

study expressed scepticism about government sources. Some of these respondents believed that government officials were prone to distorting or hiding ‘inconvenient’ facts and were prone to providing filtered information as official information was often restricted. Others described government officials to be inaccessible, “foggy”, “biased”, “untrustworthy”, and manipulative. Four clarified that they used government sources only to obtain an official viewpoint for their stories.

Twenty-two (54%) said they also sought information from businesses when reporting on S&E issues. Two regarded businesses to be important information sources. The first said: “Their decisions are based on detailed financial grounds therefore their views cannot be neglected”. The other explained: “[Businesses] are mainly the ones that tend to cash in on the environment” and “they pollute the most,” however, they also “provide the financial sources for most environmental efforts”; hence, their views need to be taken into account. Four, nonetheless, expressed doubts about businesses as sources of information. One commented that although businesses were capable of providing clear and detailed technical information, they may also be manipulative; thus, they need to be counter-checked.

Twenty-one (51%) used university sources. Eight commented positively about universities as information sources. They regarded academics to be reliable because of their capacity for providing expert views and well-researched work; their easy accessibility; and, the fact that they usually do not have hidden agendas.

Sixteen (39%) indicated that they relied on politicians for information. Three, however, provided negative opinions about politicians, who were perceived to be “self-serving”, “foggy” and “partial” with a tendency to distort or hide facts that may inconvenience them.

In addition to the list provided in the questionnaire, eleven (27%) identified the internet as one of their information sources. Five (12%) added citizens as an important source of information for environmental reporting. One explained that since citizens are most affected either positively or negatively by environmental issues, citizens can “bring the topic closer to the reader and make them aware of its relevance.” Lacy and Coulson’s (2000) study on environmental news sources, however, found that ‘consumers’ were not a frequently used source.

As show in Figure 3-15, eighteen (44%), indicated that the training did have a positive impact on how they sourced and evaluated information, and reported the following changes:

1. ability to rank and assess information;
2. ability to provided more detailed and critical information with contradicting viewpoints;
3. ability to provide a variety of angles to a story;

4. improved skills in using press releases off the internet as information sources and balancing these with information from other related sources;
5. increased reliance on research and a wider range of information sources;
6. increased scepticism towards information sources;
7. increased calmness, patience and professionalism in verifying information; and,
8. increased caution when sourcing and evaluating information.

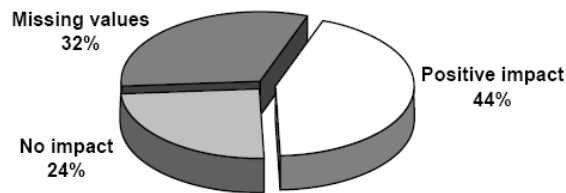


Figure 3-15 Impact of the training on the information sourcing and evaluation skills of trainees

Of the eighteen, ten indicated the following factors that contributed to their information sourcing and evaluation abilities in addition to the training: work experiences; the development of local environmental issues; easily assessable information; and, political changes that led to press freedom. Since the other eight did not indicate other contributing factors, their reported improvements were attributed largely to the training.

Ten (24%), on the other hand, indicated that the training did not have an impact on their information sourcing and evaluation skills. One explained that her information sourcing was rather determined by the availability of information in her country. Another said that it was her experiences over the years that had helped her develop her information sourcing and evaluation skills. A third clarified that she was already practising the type of reporting taught in the training; hence, the training did not have an impact.

Chi-square tests showed no differences in reported impacts on information sourcing and evaluation skills for the following identified participant variables: employment position ($\chi^2(1,n=28)=0$, $p=1.000$); years of journalism experience ($\chi^2(3,n=28)=6.222$, $p=0.101$); prior training in environmental reporting ($\chi^2(3,n=28)=0.584$, $p=0.445$); area of specialisation ($\chi^2(1,n=27)=0$, $p=1.000$); and, level of proficiency in English ($\chi^2(1,n=25)=0$, $p=1.000$).

In summary, while the training improved the information sourcing and evaluation skills of many trainees, for some, ability to source and evaluate information may have been constrained by local situational factors. A majority indicated that they used a variety of information sources, although reliance on environmental groups and governmental sources was high.

3.3.10 Impact on depth of reporting

As discussed in Section 2.10, a common criticism of environmental news reporting is its lack of depth. For instance, it has been observed that while environment journalists reported well on indicators of problems such as water and air pollution relatively few addressed underlying causes such as population or consumerism, how such problems might be avoided, or possible solutions (Detjen 2002; Major and Atwood 2004).

Although it was not an officially stated objective of the training, to find out the extent to which the training may have emphasised ‘depth in reporting’, trainers were asked if participants were encouraged to provide a deeper level of reporting by reporting, (1) the problem; (2) the underlying causes of the problem; (3) possible solutions; and, (4) how such problems might be avoided in future. Three trainers confirmed that the training did emphasise the need for depth in coverage in terms of providing the four identified aspects of environmental reporting.

Trainees were provided the four aspects and asked to indicate those that they covered when reporting on environmental issues. Twenty-two (53%) indicated that they covered all four aspects, of whom three added that they also covered social and economic aspects. Thirteen others (32%) said they covered between two and three of the listed aspects. Only two (5%) indicated that they covered a single aspect – the first said that she only covered environmental problems, while the second indicated that he focused on how environmental problems might be avoided.

Trainees were also asked to describe if the aspects they covered changed over the years and to indicate the contributing factors to that change. Four said that they were no changes. Seventeen (41%), on the other hand, reported various changes that exhibited an increase in depth of reporting. For example, one said that he increasingly viewed environmental problems from a social context. For another it was a change from merely identifying problems to providing the causes and challenges envisaged in resolving the problems. Similarly, another said that he increasingly attempted to look for the underlying causes of problems and proposed realistic solutions. A fourth said that when she first started, she used to interview people and reported exactly what they said. Her articles were merely a collection of various testimonials about a problem. At a later stage in her career, she learned to write “richer” articles with more information and better structure.

Factors that contributed to increases in depth of reporting included: more easily accessible information; increased prominence of local environmental issues; positive political changes; increased respect for human rights; help from editors; increased media freedom; professional experiences; clearer understanding of the issues; increased network of information sources; and, training programmes. Only three (7%) specified the training programme under study as a

contributing factor. Therefore, the training may have had only little impact on depth in reporting environmental issues.

3.3.11 Impact on frequency of environmental reporting

Although the objectives of the training under study had not specified improvements to frequency of environmental reporting it was assumed to be a highly likely long-term objective of training programmes in environmental reporting. For example, such programmes organised by *Conservation International* aimed to motivate increased environmental news coverage (Kelly 1999). In this study, to estimate changes to frequency of reporting, trainees were requested to provide the average number of articles they reported before and after the training. They were then asked if the training contributed to the change in frequency and to indicate other contributing factors.

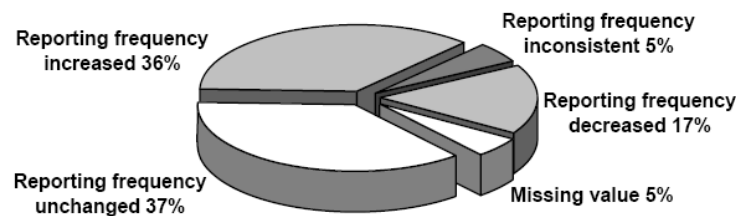


Figure 3-16 Changes to frequency of environmental reporting after the training

As Figure 3-16 demonstrates, fifteen (37%) indicated an increase in reporting frequency and they attributed the increase to the training. Increase was due to improvements to their writing and information sourcing skills; increased knowledge about environmental issues; increased level of 'inquisitiveness', and increased contacts with people in the environmental field as a result of attending the training. Positive reception from employers; personal initiatives to acquire further knowledge; and their personal experiences had also contributed to the increments in reporting frequency for some respondents. For one, recognition of his increased knowledge base by others in his organisation presented him the opportunity to increase his environmental reporting. He added that reporting was further enabled by the fact that there weren't many other environment reporters in his region. Another attributed her increased reporting frequency to a newly developed enthusiasm for environmental reporting – a result of witnessing the level of devotion trainees from other countries had towards environmental issues. These two cases were regarded to be examples of positive indirect outcomes of the training.

Fifteen (37%) reported that the frequency of their environmental reporting remained the same as before the training. One explained that this was due to lack of time. Another pointed out that frequency was rather determined by her editor. A third explained that because he was in another area of specialisation he was able to report on environmental issues only occasionally.

Seven (17%) indicated a decrease in their environmental reporting or that they were not covering environmental issues at all. Five explained that this was because they were focusing on a different reporting area. One reporter was in fact repositioned after her training. She said: “Unfortunately I have been transferred to another department...where I cover celebrity and women’s issues...”. Another explained that she had changed jobs and that she covered environmental stories only as a freelancer. For another, decrease in frequency was a result of negative responses from his employer.

Two (5%) indicated an inconsistency in their reporting. The first said: “My duties keep changing. Since my return from the...training, I have covered just a few [stories on] environmental issues... My present duties and assignments are based more on politics and social issues.” The other explained that the magazine she worked for gave little priority to environmental issues. She however, does attempt to “push environmental stories as often as possible.”

Chi-square tests showed no significant differences in reported impacts on reporting frequency for the following participant variables: employment position ($\chi^2(1,n=34)=0.052$, $p=0.820$); years of journalism experience ($\chi^2(3,n=34)=10.671$, $p=0.014$); prior training in environmental reporting ($\chi^2(1,n=34)=0.035$, $p=0.851$); area of specialisation ($\chi^2(1,n=32)=0.078$, $p=0.780$); and, level of proficiency in English ($\chi^2(1,n=31)=1.146$, $p=0.284$).

Although the training resulted in increases in the frequency of environmental reporting for some respondents, for others, reporting frequency appeared to be constrained by other factors such as lack of time, editorial control and changes to their assigned duties. This stresses the need, as Kirkpatrick (1994) suggested, for training organisers to ensure an enabling situation and positive employer reception when trainees return to work after the training.

3.3.12 Impact on personal views about environmental and sustainable development issues

Change in personal views was identified as a probable outcome of the training. Participants were asked to indicate if the training changed their personal views about environmental and sustainable development issues and to list other factors that may have also contributed to the change. As illustrated in Figure 3-17, nineteen (46%) remarked that the training did have a positive impact on their personal views.

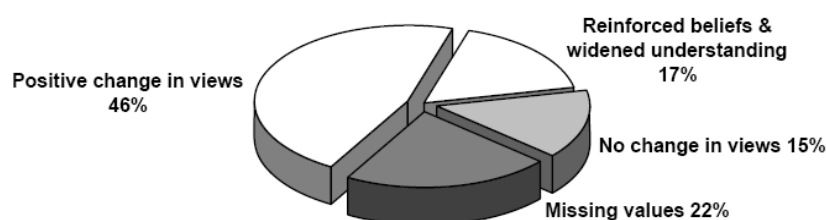


Figure 3-17 Impact of training on trainees' personal views about environmental and sustainable development issues

Eight attributed their change in view to knowledge about environmental issues that the training provided. In the words of one:

It made me see what an important topic it is and how it is interlinked to everything we already report on from politics to health. We rely on our planet and we have to preserve it – with this in mind environmental journalism becomes one of the most important forms of journalism we have today.

Another said: “I [now see] the environment not as a separate entity, but as an entity entwined with all parts of public life.” Another attributed his change in view to the nature of the training that had added a human touch to environmental issues. In addition to the training, most of these respondents provided other factors that had also contributed to their personal views, such as, information on the internet; references to literature; interactions with the public; involvement with community environmental projects; interactions with environmental groups; related work experience; education; participation in conferences; other training programmes; and, witnessing local environmental deteriorations.

Seven others (17%) did not indicate a definite impact on their personal views; but, they reported that the training reinforced their existing principles and beliefs about the importance of environmental issues and widened their understanding about the issues. Six (15%) indicated that the training had very little or no impact on their personal views.

3.3.13 Impact on environmental behaviour

To ascertain possible impact on behaviour, trainees were asked if the training motivated them to make personal behavioural changes for environmental reasons and to indicating other motivating factors. As presented in Figure 3-18, eleven (27%) reported that the training did in fact motivate them to make some positive behavioural changes. Two, for example, indicated that they recycled more. Another two said that they became more careful with water usage. One avoided processed food, while another made an attempt to reduce use of plastics. Their behaviours, however, were also a result of other factors which included: concerns about future generation; increased awareness about the issues; affiliations with environmental and animal rights activist groups; work experiences; the status of public health; and, ethical and moral beliefs.

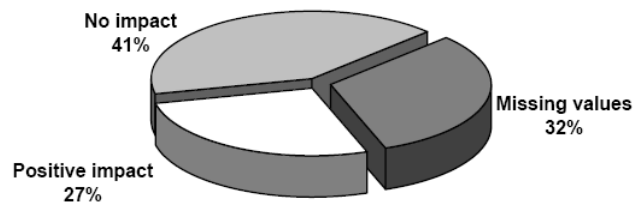


Figure 3-18 Impact of training on trainees' environmental behaviour

Seventeen (41%), in contrast, indicated that the training did not motivate them to make any personal behavioural changes. Seven clarified that they were already practising environment-friendly behaviour prior to the training programme, while one clarified that the change in her environmental behaviour was triggered by other factors.

3.3.14 Impact on motivation towards specialisation in environmental reporting

This assessment also attempted to find out if the training motivated participants to take on environmental reporting as an area of specialisation. To establish the 'pre-intervention status' trainees were first asked to indicate what they had desired to specialise in when they first became a journalist. In a subsequent question they were asked to indicate when it was that they first became interested in environmental reporting and why. In a later section of the questionnaire, trainees were asked if the training motivated them to take on environmental reporting as an area of specialisation.

As illustrated in Figure 3-19, twelve (29%) indicated that environmental reporting was the area they wanted to specialise in when they first became a journalist, while four (10%) indicated the environment to be one of several areas that they had desired to specialise in. Twenty-two (54%) specified an interest in other areas such as science, technology, foreign affairs, politics, finance, business, pop-culture, music, arts, fashion, culture, education, crime and war reporting. Two (5%) said that did not have a specific interest area when they first began.

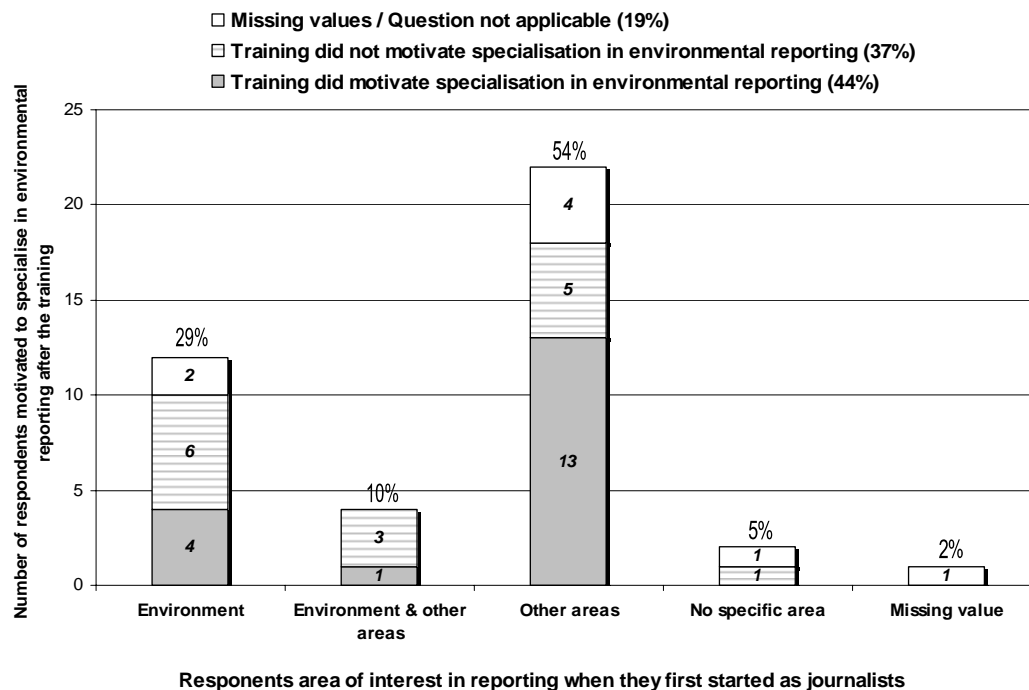


Figure 3-19 Respondent's initial area of interest in reporting and number of respondents motivated to specialise in environmental reporting as a result of the training

None indicated the training to be a factor that triggered their initial interest in environmental reporting; instead, as shown in Figure 3-20, respondents provided a variety of other factors.

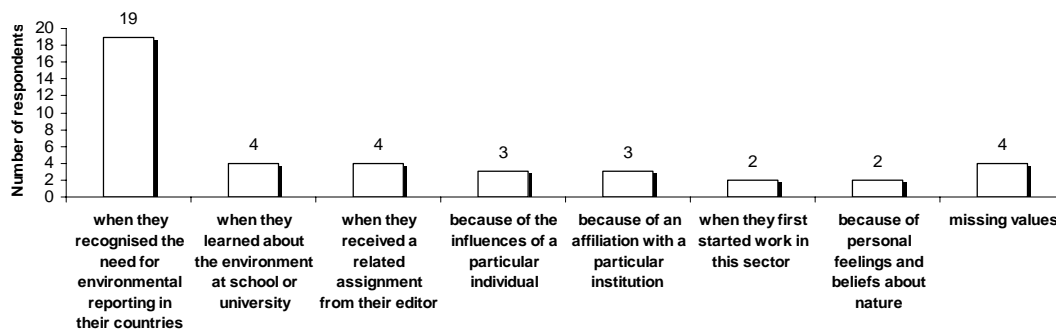


Figure 3-20 Factors that had triggered respondents' initial interest in environmental reporting

Nevertheless, eighteen (44%) indicated that the training did motivate specialisation in environmental reporting (see Figure 3-19). This was especially evident in the group that did not have a pre-existing desire to specialise in environmental reporting; over half from this group said that the training motivated them to want to specialise in environmental reporting. In the case of this group, it is possible to attribute the influence largely to the training. Although these respondents did have a pre-existing interest in environmental reporting, the training amplified their enthusiasm to specialise in environmental reporting.

In another section of the questionnaire, where respondents were asked to identify the most important or biggest impact that the training had on them, four said that it enhanced their appreciation for and interest in environmental reporting. In the words of one respondent: The training "...created keenness on environmental news issues and sharpened my reporting skills, although I'm not a specialist in environmental reporting". Another indicated that the training changed his level of appreciation of the environment and it changed his overall view about environmental reporting.

Fifteen (37%), on the other hand, indicated that the training did not motivate them to take on environmental reporting as an area of specialisation. Seven explained that they already had a pre-existing interest in environmental reporting, or that they were already specialising in this field. One said that he did not want to specialise because of his diversified interests, while another said: "I think we can write about environmental issues even when we report on business, personal finance, international news, etc. I think environment is a global issue that is included in every other issue".

In sum, most journalists in this study did have a pre-existing interest in environmental reporting, and many had a pre-existing desire to specialise in environmental reporting. Nevertheless, for some, the training did motivate an interest to specialise in environmental reporting. However, as one respondent in this study pointed out, environmental issues could be incorporated in various news areas – putting forward the question if specialisation in environmental reporting is a necessity for improvements to environmental news coverage.

3.3.15 Practicability of reporting style taught

It was reasoned that international training programmes in environmental reporting should take into account variations in the practice of journalism between countries to ensure the practicability of the reporting style taught. Based on the objectives and contents of the training under study, and feedback from the trainers, it was noted that the training had taught fact-based, research-oriented, investigative reporting and had emphasised objectivity and balance. These were regarded to be standard practices in Western journalism.

To find out trainees' view about the practicability of the style of reporting taught, they were first asked to select from a list of seven statements, those that best described the style of environmental reporting taught in the training. Respondents were then asked to evaluate the effectiveness of the reporting style taught in terms of the cultural, social and political situation in their home countries and the practice of journalism within their organisations.

As results presented in Figure 3-21 indicate, a majority (over 50%) selected statements that resembled the style that had been taught in the training. A few, however, indicated public and advocacy journalism which had not been part of the training.

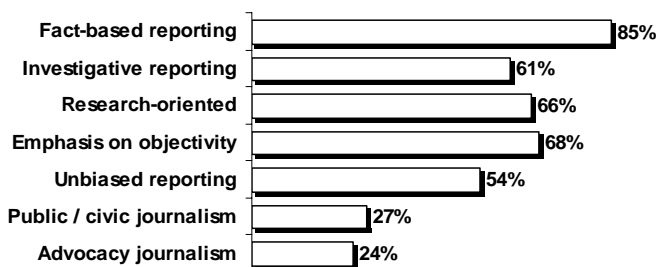


Figure 3-21 Style of reporting taught in training as indicated by respondents

As shown in Figure 3-22, eleven (26.8%) indicated the reporting style taught to be effective. One emphasised that the style taught was a good approach for educating the public about environmental issues. Another believed that such a style of reporting could enhance government and public trust in the information provided and in the media organisation.

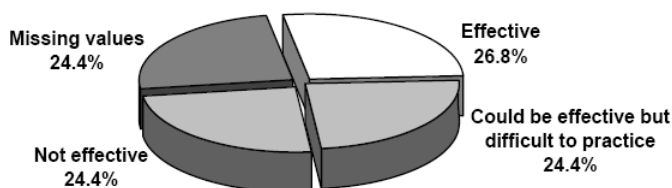


Figure 3-22 Practicability of the reporting style taught as indicated by trainees

Ten (24%), however, indicated that although the reporting style taught could be effective there were difficulties with its practicability in their countries and organisations. One, for instance believed that the low levels of public awareness in his country needed to be addressed instead with an advocacy approach to environmental news reporting. Another explained that the style of environmental reporting taught was difficult to practise because of the political instability in her country. She added: “In a country where people are poor and starving, there is little patience for environmental reporting of any kind.” Providing a similar view, a journalist from another country commented that although she believed the style of reporting taught to be adaptable, in her country, the popularly held view was that the environment was not as important as human tragedies. Another reporter commented that in her country media organisations decided their own style of reporting. Similarly, another said that although the style taught could be practicable in her country, she had to adhere to the general style practised within her organisation.

Ten others (24%) stated that the style taught was not effective. One explained that the style was too “modern” for his country, where the norm is for environment reporters to simply report on indicants of environmental problems. Another found it difficult to practise balanced and objective journalism. She said: “The public expects that you take a stand, and you express strongly your

opinion”. A third indicated that the style taught was not suitable because of the lack of political interest in his country as well as a lack of editors’ interest towards environmental issues in his organisation. Another explained that he was not able to delve too deeply in investigating issues within his organisation, as his assigned role was to seek out new stories.

Although the training programme had emphasised the importance of research and providing information from a variety of angles, one respondent indicated that this was not feasible in her country. She explained that there was no law in place to ensure free access to information. This lack of law placed some officials in untouchable positions. She added that this was made worse by reluctance among editors to confront such officials. Another respondent noted that such a style of environmental reporting could not take shape within her country as all major newspapers and broadcast stations were owned and controlled by political parties. A third explained that investigative reporting hardly existed in her country because of the fragile political situation that made it dangerous for reporters to report on certain individuals. She added that journalists were often underpaid and this meant “that investigative reporting does not pay off.” “What pays off” she said was “to rewrite [official] statements and short articles”.

Therefore, investigative and research-based reporting may not be easily applicable in developing countries where there are political constraints that restrict access to information. Friedman and Friedman (1989) observed that investigative reporting and playing a watchdog role were more popular among reporters in the United States than in Asia. Freedman (2004: 159) emphasised the importance of recognising “the psychological effects on journalists who operate under strict governmental scrutiny.” In Uzbekistan, for instance, “many environmental problems implicate past and current governmental policies,” hence, the country’s “national, regional and local governments discourage aggressive reporting that may embarrass officials and their allies” (*ibid*: 159). Similarly, Wang (2005) observed how environmental journalism in China was constrained by its government’s control over information.

Based on the above, it is suggested that training programmes involving international participants should consider the possibility of varying needs of journalists from different countries. It may be appropriate to include a session in the training programme that discusses the implications and relevance of journalism approaches taught to the home countries of the trainees. This session should also discuss the feasibility of the reporting style taught and address possible constraints that journalists may face as a result of cultural, political and social situations in their countries.

3.3.16 Addressing the objectivity-advocacy debate in environmental journalism

In Section 2.13, we saw that the objectivity-advocacy debate is one that still persists in the field of environmental journalism (Detjen 2002; LaMay 1991; Nelson 1995; Willis 2003). In this study, to

find out how the training addressed this debate, trainers were asked to indicate how the principle of objectivity in journalism was presented in the training, and how the objectivity vs. advocacy debate was addressed. Emphasising the importance of adhering to the principles of objective journalism in such training programmes, one trainer stated:

I took the view that it was the best, and most moral, use of the Reuters Foundation's resources to stick to the basics of objective reporting. This caters for the different opinions and target audiences you invariably meet in any group of journalists. Any good practitioner of advocacy or campaigning journalism (a much-abused form of journalism) will be more effective if they have a proper understanding of objective journalism...The principles of objective journalism are, broadly speaking, held and practiced in common, while each advocacy journalist ploughs their own furrow. For a workshop, the former is more appropriate.

Another trainer said that objectivity was presented "as fundamental to all reporting. It is the journalist's task to present all views on a particular issue, to enable the reader to make up his own mind on the basis of his/her own experience and the fullest information possible." He added that although the difference between objectivity and advocacy in journalism was explained, the training had not "touched on advocacy journalism...[as it was] an area not much visited by Reuters journalists." The third trainer indicated that the training had highlighted objectivity during theoretical work and practical exercises and that "trainees [had] exchanged opinions on the issue of health and environment advocacy as an element in their work."

Based on the above responses it was established that the training had emphasised objectivity in reporting, and had to some degree addressed the objectivity-advocacy debate. To find out trainees' views on the objectivity-advocacy debate, they were first asked to indicate what they perceived the role of an environment reporter to be. They were then asked where their stand was in the debate – if environment journalists should play the role of an advocate in mobilising action or if they should strictly adhere to the rules of objectivity in traditional journalism.

Respondents provided varying views about the role of an environment reporter. As Figure 3-23 shows, nine (22%) indicated that the role of an environment journalist is to present environmental stories in an objective, unbiased, accurate and well-rounded manner.

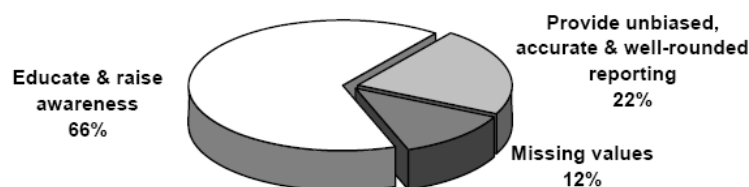


Figure 3-23 The role of an environment reporter as perceived by respondents

Twenty-seven (66%), on the other hand, believed that a major role of an environment reporter was to educate people and to raise public awareness about environmental issues. As one reporter put it: "In my country, it would be educating people, without any doubt". Another said: "To educate or

sensitise the general public on the importance of their environment [and to highlight] the benefits that could be gained through its sustenance.” A third said:

To be one step ahead of society concerning not only contemporary but also future dangers connected to [the] environment. In post-soviet countries...the role of an environmental reporter is not only [to] investigate and report, but also [to] educate [the] listener.

These responses may be associated to what LaMay (1991: 109) earlier observed – that “to teach”, “is essentially what many environmental reporters mean when they argue for being advocates... They want to make information actionable.” The above responses also lend further evidence to earlier observations by Friedman and Friedman (1989) that the role of an environment journalist as an ‘educator’ may be something that is more widely accepted in developing countries. Friedman and Friedman found that while in the United States reporters and editors regard their role to be informers, Asian journalists readily accept their role as educators.

While the training emphasised objectivity in reporting, participants on the other hand, provided varying views about objectivity and its relevance for their countries. As shown in Figure 3-24, nine (22%) believed that environment journalists should remain objective. One emphasised that staying objective was the only way to ensure that the right environmental issue are addressed and to mobilise action. Another said that journalists who attempted to play the role of environmental advocates sometimes made mistakes. A third said that she believed in strict adherence to objectivity and that an environment reporter should remain objective even when he or she knows that defending the environment was the right thing to do.

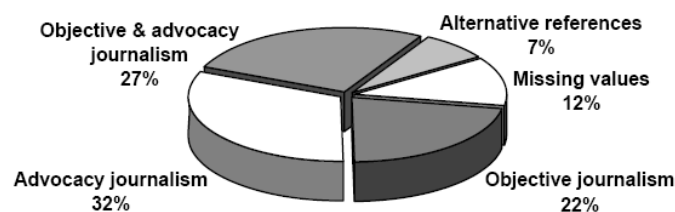


Figure 3-24 Respondents’ stand in the objectivity-subjectivity debate in environmental journalism

Three (7%) provided alternative references to the reporting style that they preferred. The first indicated that “clarity in reporting” was called for in illustrating impact on people and the environment. The second said: “I think I’d prefer to call it balanced or fair reporting rather than objectivity or advocacy. There is no doubt that balanced reporting is essential if credibility is to be maintained. By balanced, I mean representing both sides of a story.” She further commented that the training was a reminder for her that it was balanced reporting that was most appreciated by readers. However, she also said that for her, balanced reporting sometimes posed a dilemma, when it meant “erasing the passion in writing”. The challenge, she said, was to maintain the “passion” and to “leak it out in small doses to the reader, so that the article is not dismissed as ‘rabid environmentalist’”. For the third, transparency in reporting was the preferred style. She explained:

...staying objective to the truth is never served, unless you do your work in a clear, objective, fact-based manner. Subjectivity can always allow detractors to point fingers and scream bias,

thereby affecting the very cause that you are working for. [By being] transparent, you may achieve less, but what you do will have a strong foundation.

Quite the reverse, thirteen (32%) voted for advocacy journalism. One journalist remarked:

I think objectivity is an easy way of not taking a stance on anything. By all means we should be accurate but we should also not be afraid to pick a side and advocate it, especially if doing so will benefit our readers. There is a time and place for traditional journalism but in a field like the environment where there is so much wrong with it, and so many of our people need to be educated we cannot afford to sit on the fence.

Another believed that advocacy journalism was necessary for a journalist to be able “to warn”, “to educate” and “to be [the] consciousness of a society.” He however stressed that this should be done legally, based on facts and in a wise and professional manner. He thus regarded journalistic activism to be different from environmental activism. A few journalists believed that advocacy reporting was important for encouraging public action. In the words of one:

[Environment journalists] should play the role of an advocate in mobilising action. [They] should be advocates for change to improve the quality of the planet. They should educate people about the serious problems that exist and use the power of the news media to bring about changes to improve the quality of the Earth – air, water, wildlife and natural resources...Still, I am NOT advocating that journalists should write about issues from the sole perspective of environmental activist groups or that they should ignore viewpoints of business leaders or people who are sceptical of environmentalists. On the contrary, they should continue to maintain a healthy scepticism of all individuals and organi[s]ations they report about and they should continue to ask probing questions in order to try to determine the truth.

Relating it to the context of her country, another remarked that advocacy journalism was suited for developing countries, where unlike developed countries, there is little press freedom and little desire among the public to seek alternative information. Another reasoned that unlike objective journalism, advocacy journalism was result-oriented and tended to achieve targeted results faster. Two, however, commented that while they personally believed in advocacy journalism, as employees of news organisations they had to remain objective. One of them noted the lack of environmental concern in her country and believed that advocacy journalism could be a means to increase concern for nature conservation.

Eleven (27%) took a somewhat dual stand, indicating the relevance of both types of reporting. As one respondent put it: “There’s a very thin line between these two and a journalist should take a middle path.” Another indicated that the journalism approach taken was dependent on the type of media organisation, while another believed that it was dependent on the nature of the subject. A fourth, explained that while adhering to objectivity, journalists could still include “a fine thread of advocacy in their stories”; for example, by placing advocating opinions in the beginning of a column. Another commented that both approaches should be used to achieve results; he said:

While respecting the ethics of the profession by being objective in reporting developments in the environmental field, the beat reporter must blend that with some elements of advocacy by highlighting, sensitising and educating the citizenry on emerging issues of concern with regard to the brazen abuse of the environment.

In the words of another: “To achieve a meaningful purpose, I think the journalist could be both objective and subjective, depending on the situation, to bring about a useful purpose.”

Somewhat in accord with the above findings, Detjen (2002) observed that contrary to media organisations in developed countries, those in developing regions such as Africa, South America, and parts of Asia are likely to be in favour of advocacy. Detjen also suggested such differences based on media type. In this study, however, such distinct trends were not observed for media types. As illustrated in Figures 3-25 and 3-26, the preference of journalism style as indicated by respondents appeared to be varied among media types and media ownership. Appearing contrary to Detjen’s observations, six of fourteen journalists representing mainstream newspapers; one of three from magazines; and three of six from broadcast stations (television and radio) indicated a preference for advocacy journalism (see Figure 3-25). These findings, however, are to be treated as the perspectives of individual journalists, and may not necessarily reflect the views of the organisations they represent.

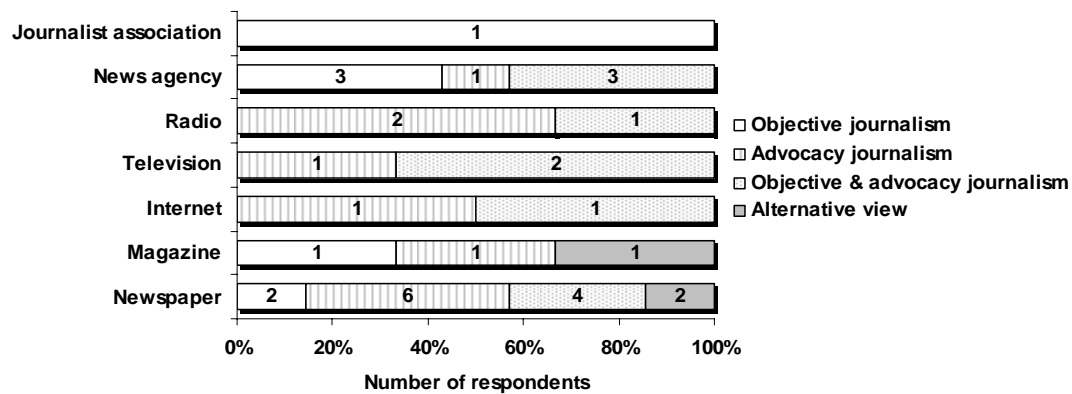


Figure 3-25 Respondents preference of journalism style according to media type

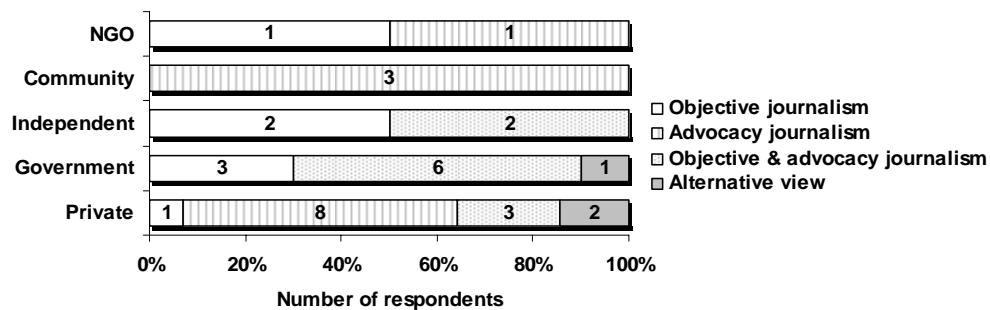


Figure 3-26 Respondents preference of journalism style according to media ownership

It was also observed, as presented in Figure 3-26, that eight of fourteen respondents representing privately-owned media and all three representing community-owned media indicated a preference for advocacy journalism. Six of ten respondents representing government-owned media indicated a preference for a journalism style that combined objectivity and advocacy. It may be the case, as

Nelson (1995: 37) observes, that in developing countries reporters are required to be advocates for development:

In some countries, government officials tell journalists they have an obligation to promote development in their nation...Given the urgent need for development in many countries, this can be a powerful argument. And the pressure to be an advocate for development is strong not only because of nationalism but because governmental authority is involved.

In brief, while the objective of the training under study and the approach taught by its trainers had emphasised objectivity in reporting, participants, on the other hand, provided varying views on the type of reporting that was suitable for their countries. The preference of journalism style as indicated by respondents appeared to be varied among media types and media ownership. Still a high percentage believed in the importance of advocacy journalism.

3.3.17 Reception towards ‘sustainable journalism’ as an alternative approach to environmental reporting

Following-on with the objectivity-advocacy debate, respondents were provided with Detjen’s (2002) definition of ‘sustainable journalism’ and were asked to indicate their views (See Appendix 2 – Part 4.7). As shown in Figure 3-27, a vast majority of eighty-six percent (35) were supportive of the suggestion for this alternative approach to environmental reporting.

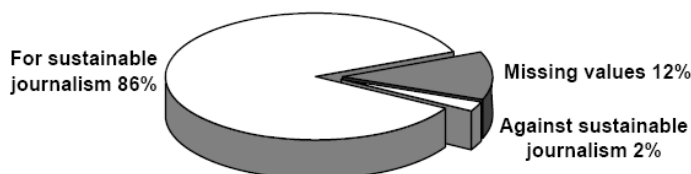


Figure 3-27 Respondents view about the suggestion for ‘sustainable journalism’ as an alternative approach for environmental reporting

The following quotes demonstrate their positive view:

I would be in favour of that, without any doubt. As there is a need to explain the idea of sustainable development to the general public, I believe sustainable journalism is the best way to achieve that.

Positive. Because there will be more opportunities for the truth to reach the public.

My view is that in the long run this kind of journalism will help save the environment and even help...future generations and it should be maintained.

Sustainable Journalism is a good idea because it allows for better detailed exposé of the issues affecting the environment as a means of incorporating all citizens into playing active roles in deciding their future and those of generations yet unborn. This will enable stakeholders to begin to think of not just their lives here on earth but also the good of generations yet unborn.

It is definitely the way forward and should be promoted in newsrooms and more importantly, journalism schools across the continent.

Very important, dynamic and positive evolution in the field of journalism.

I believe it is a more value-laden approach that cuts through the selfish guilt-tripping raised up in objectivity.

Sounds ok to me as a whole. The suggestions are essentially emphasising good journalism – and that’s the reason why it sounds good to me.

Yes that is an excellent idea. I think so because it matches with [my views about the role of an environment reporter] – it is about finding answers, not just creating more questions.

I think, taking a new approach to environmental journalism will remove the stigma that it had, that of it being an academic exercise by environmentalists only unlike the current situation where it embraces that which is so dear to mankind and his/her well-being.

While expressing her support for what sustainable journalism means, one respondent suggested that the term used to define such an approach should be of secondary importance. Another said that she was supportive of such an approach as long as it does not replace the “watchdog” role of the media with a “mediator” role. Another respondent noted that such an approach was probably the best way, but she also pointed out that it would be difficult to materialise.

Only one (2%) disagreed with the suggested approach; he said: “The problem with this confused approach is that the distinction between journalists and environmental lobby groups will be blurred”.

Trainers who were addressed with a similar question about the proposition for this alternative approach provided varying views. One trainer regarded sustainable journalism as the “old” approach to environmental journalism. In his view, environmental problems were too complex to be easily solved. He believed that “a broad understanding of the views, motivations and interests of all sides, including the ‘bad guys’, was essential for a journalist to be able to write informatively and effectively about any theme”. Two, on the other hand, provided positive opinions about sustainable journalism. One of them pointed out that the description of sustainable journalism was similar to “good traditional journalism.” The other, however, cautioned the possible consequences of replacing the term “environmental” with “sustainable” entirely, since the term “sustainable” is often used to “mask the inflow of economic development priorities over social and environmental ones”.

In sum, a vast majority of respondents in this study were optimistic about an alternative approach to environmental reporting – sustainable journalism – that aims to compatibly combine the best aspects of traditional journalism with aspects that educate and seek solutions to environmental (Detjen 2002). It was thus suggested that training programmes in environmental journalism could discuss the implications and practicability of such alternative approaches in addressing the objectivity-advocacy debate.

3.3.18 Reception from employers and co-workers

Although training can motivate journalists to want to improve quantity and quality of reporting, this achievement would depend on the reception of their employers. Kirkpatrick (1994: 23) provided five possible situations that trainees could be faced with in terms of their employer's reception after the training:

- (i) Preventing: The employer forbids the application of what was taught in the training. This may be due to conflictions with the employer's management style or compliance with organisational culture established by top management.
- (ii) Discouraging: Although the employer does not explicitly prohibit the application of what was taught, it is made clear to the trainee that such changes are not welcome.
- (iii) Neutral: The employer "ignores the fact that the participant has attended a training program. It is business as usual" (*ibid*: 23). The employer does not object to a trainee's initiative to make changes, as long as the job gets done. However, if the initiated changes cause negative results, the employer "may turn into a discouraging or even preventing climate" (*ibid*: 23).
- (iv) Encouraging: The employer encourages the application of what was learned to the job. In an ideal situation, the employer would discuss with the trainee about what was learned and how this might be applied to the job.
- (v) Requiring: The employer is aware of what was taught in the programme and ensures that what was learned is applied to the job. This process is sometimes aided by learning contracts which state what trainees have learned and what they have agreed to do. Employers then ensure that the contracts are implemented.

To evaluate the reception of the media organisations towards the training under study, respondents were asked if their supervisors requested feedback, a presentation or report, or training for others, when they returned to work after the training. In addition to employer reception, in this study, reception of co-workers was regarded to be an indicator of organisational reception, as well as an indicator of unintended impacts. Hence, respondents were also asked if any of their colleagues had approached them for advice or tips on environmental issues.

Findings, as presented in Figure 3-28, showed a fairly good reception. Twenty-five (61%) reported that their supervisors did request feedback. Ten (24%) indicated that they were requested to give a presentation or write a report on the training programme, while three (7%) were requested to train others in their organisation. Two on the contrary clarified that such requests were not made of them because they had attended the training on their vacation time. Another explained that the style of reporting taught in the training was not suited to her media organisation; hence, such requests were not made. Eight reported that although such requests were not made of them, they did share what they learned with their co-workers and peers on their own accord.

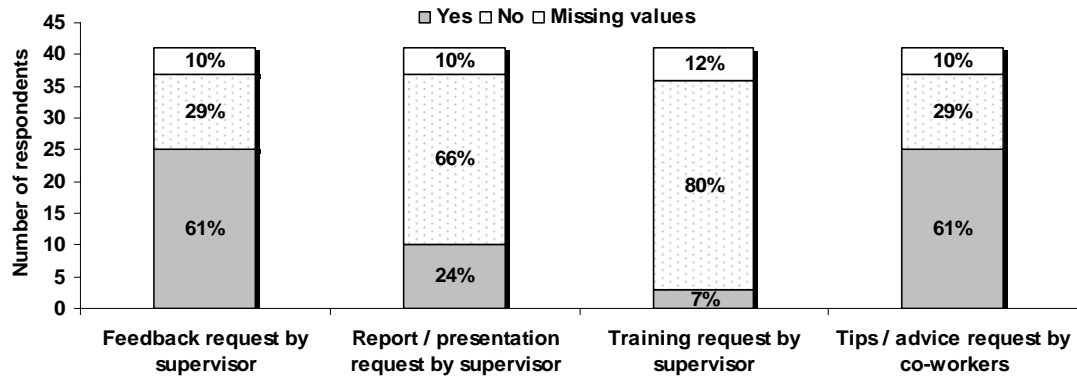


Figure 3-28 Reception from employers and co-workers towards trainees

Twenty-five (61%) reported that were approached by co-workers and peers who were interested to know what they learned in the training. One explained that this was inevitable since brainstorming was a usual practice in his organisation. Another reported that environmental issues and strategies on reporting became the subject of daily discussions in her office upon her return.

In general, trainees in this study experienced positive receptions from their co-workers and employers when they returned to work after the training. Positive employer receptions may lead to the *encouraging* situation in which the employer encourages the application of what was learned to the job and it could also lead to the *requiring* situation in which the employer ensures that what was learned is applied to the job, as described by Kirkpatrick (1994).

3.3.19 Problems trainees face in environmental reporting

Participants were asked if they faced any problems in attempting the environmental reporting approach they learned in the training. A subsequent question asked if they were able to find solutions to their problems. They were also requested to select from a list of ten obstacles to environmental reporting, those that they observed in their organisation; and, to provide their view about what needs to be done to overcome the obstacles. Trainers, on the other hand, were asked to provide their views on what they thought were the main issues in environmental reporting and to provide suggestions for improvements.

As shown in Figure 3-29, a majority of sixty-three percent (26) indicated that they did not face any problems in general in attempting the environmental reporting approach they learned.

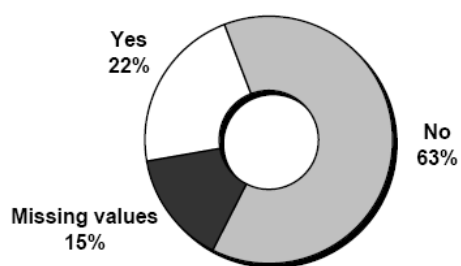


Figure 3-29 Response to the question: After undergoing the Reuters-BFSD training programme, did you face any problems in attempting the approach of environmental reporting you had learned

Nine (22%) indicated that they did face various problems, some of which included: barriers against the press; difficulty obtaining information on complex topics; lack of access to information; lack of travel funds available for gathering essential information; restrictions placed on presenting certain viewpoints; lack of interest in environmental issues within their organisations; and, newsroom censorship. Two indicated that they were able to find solutions to their problems to some extent. One of them said that the knowledge gained from the training helped him resolve his problem to some degree. By widening his information sources, he was able to gain strategic information on environmental issues from alternative sources such as the internet.

As Figure 3-30 shows, 'lack of time' was the most frequently cited obstacle to environmental reporting. This finding was in line with many previous observations that have found lack of time to be a major constraint for environment reporters (Archibald 1999; Friedman 1983; Goodell and Sandman 1973; Harrabin 2000; Sachsman *et al.* 2006). Five in this study commented that one way to overcome this problem would be to increase the number of specialist environment reporters.

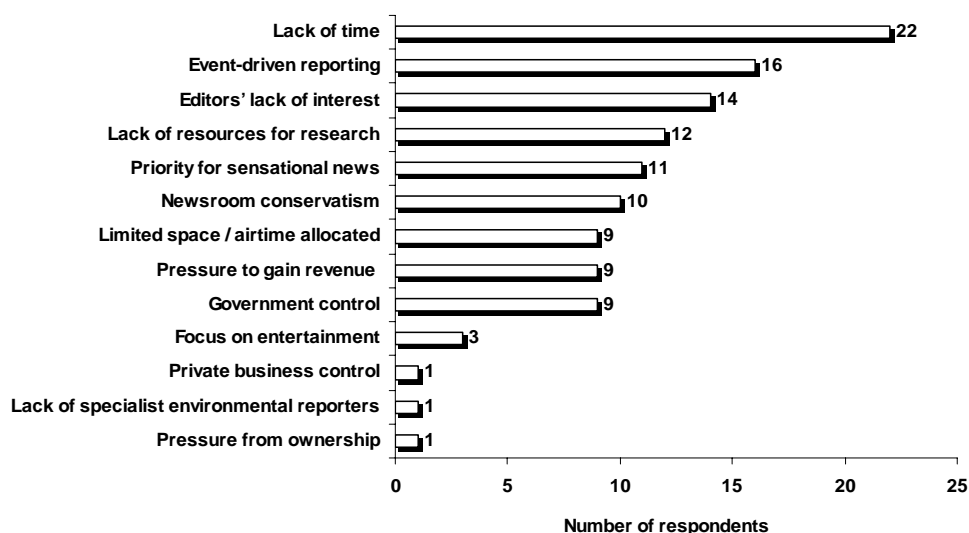


Figure 3-30 Obstacles to environmental reporting as observed by trainees in their organisation

Many also indicated 'event-driven reporting' to be an obstacle to environmental reporting within their organisations. As has been addressed in Section 2.10.5, event-driven reporting is seen to be

problematic in environmental journalism for several reasons. One, because there will be coverage only when there is an event. Secondly, since most S&E problems tend to be long-term issues rather than events it poses a difficulty in their coverage. A third problem is that when an issue is presented as a one-off event it does not provide a clear picture of the actual situation in hand. Considering that in this study, journalists themselves have identified the media's event-driven tendency to be a problem, it is suggested that future training programmes should address this problem and provide strategies for reporting issues independent of events.

The third most frequently cited obstacle among trainees was 'editors' lack of interest'. Likewise, one trainer identified editors' lack of interest and "editorial pressure and self-censorship" to be a major issue in environmental news reporting. Nine trainees also indicated that were not been able to influence their editors to publish environmental stories. One believed that his editor's lack of appreciation for environmental issues was a result of a lack of knowledge. In explaining why she was not able to apply the techniques and approaches learned at the training to her job, another said that the editors in her organisation generally did not favour environmental stories, even when they were important ones because of a perception that such stories were not "profitable". She added: "...it is easier for them to get on cover some hot story about some movie star, singer, or financial scandal and people will buy the newspaper". She then pointed out: "A training programme on environmental reporting is not enough; one is also dependent on the goodwill of editors and officials of the organisation." In contrast, another respondent said that a major factor that contributed to his abilities in environmental reporting was the devotion of the editorial board of his organisation towards environmental issues. Four suggested that training and education for editors could increase their sensitivity towards environmental issues.

Friedman (1983) observed that editorial control is often cited as a major obstacle in environmental reporting. Correspondingly, two trainers in this study highlighted the need to overcome editorial control for improvements to environmental news coverage. The first suggested: "Work with editors and media decision makers to emancipate environment as a topic." The other stressed the need to raise the "profile" of environmental news "among editors and the public".

In addressing the problem of 'lack of resources', which was the fourth most frequently cited problem, one trainee suggested that one way would be to create a specific agenda for environmental issues within the media organisation. Two others suggested that this problem could be overcome by increased external funding.

One trainer indicated that "the domination of economic [and] political aspects over environmental ones" and a "lack of specialised environmental reporters [and] editors in most media" as another problem area for environmental journalism. He also noted the "lack of specialised environmental

journalism training.” Three trainers suggested that further training programmes and workshops can serve to further improve the status of environmental news reporting. One trainer suggested: “There may be a need for some specialised reporters, but every journalist should be an environmental reporter, since it affects so many parts of our lives.” Similarly, another trainer suggested that “environmental reporting [should be integrated] in all journalism training programmes.” He also suggested the need to “create regional and national networks and forms of exchange between environment journalists” and “online and other tools to assist environmental media reporting” and the capacity of journalists reporting on this area.

3.3.20 Equipping trainees with coping strategies

Considering the common problem of lack of editorial interest in environmental reporting and other problems journalists face in environmental reporting, this study evaluated if these issues were addressed in the training. Both trainers and trainees were asked if the training included tips on how to influence editors and supervisors in order to increase reporting on environmental and sustainable development issues. They were also asked if the training provided an opportunity to brainstorm on problems journalists face and strategies to overcome problems.

Based on answers from the trainers, it was noted that tips on how to influence editors and supervisors was provided to some degree. One trainer said that this was not specifically provided since the “working practices, relationships, and environments vary from country to country”. Nevertheless, he said:

I always stressed the view...that environmental reporting should be made as interesting as possible and that a well-written story will always please editors and audiences alike. The best way to persuade your editor to publish/broadcast a story on an environmental theme is to write/produce a red-hot story which cries out for the front page/main bulletin.

The three other trainers, on the other hand, indicated that the training did provide tips on how to influence editors and supervisors. One said that this was discussed as a special topic during a workshop session. Another explained that he had provided tips on “how to spot an environmental story, and how to present it so that editors who may not be environmental enthusiasts are keen to run it.” All four trainers indicated that the training did include opportunities for trainees to brainstorm on problems and solution strategies.

As results presented in Figure 3-31 illustrate, trainees provided varying answers about the inclusion of tips to influence editors in the training programme.

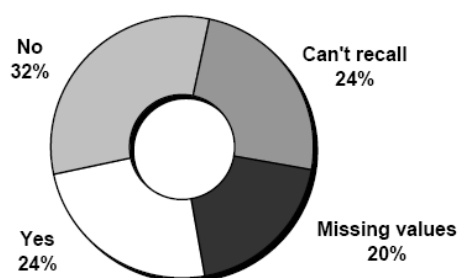


Figure 3-31 Response to the question: Did the training programme include tips on how to influence your editors and supervisors to enhance reporting of environmental and sustainable development issues?

Thirteen (32%) indicated that such tips were not provided. One commented: “I think cultural [and] professional differences between the Western trainers and the mostly Eastern trainees prevented tip exchanges, as did the cultural [and] professional differences between people of various nationalities in the audience”. Ten (24%), on the other hand, indicated that the training did provide the following tips: discuss with editors about story ideas; expand coverage of international environmental issues; add human and economic aspects to the story; show an understanding of the problem while identifying its causes and recommending possible solutions; be accurate in reporting; and, be “stubborn” and brave in asking to publish the stories in hand.

As Figure 3-32 demonstrates, over half (54%) indicated that they did experience a brainstorming session in the training programme in which problems and strategies were discussed. Some of the aspects covered, according to these respondents included: discussions on how to increase environmental reporting; accessing information sources; dealing with uncooperative respondents; and, dealing with potentially dangerous situations. One pointed out that although the brainstorming led to discussions on the bigger picture of environmental reporting, the difference between the countries had been too substantial for the development of any common strategy.

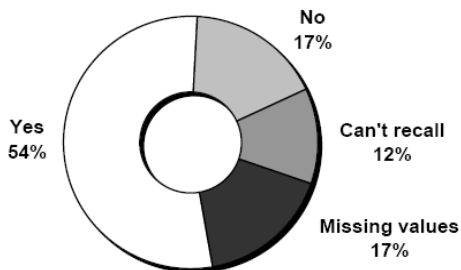


Figure 3-32 Response to the question: Did the training programme provide an opportunity to brainstorm the problems journalists face in environmental reporting and develop strategies to overcome these problems?

Considering the vast areas of problems environment reporters face, it is recommended that training programmes in environmental reporting provide a greater emphasis in the discussion of these problems and the development of relevant strategies.

3.3.21 Impact in the newsroom – increasing environmental news coverage

To find out the extent to which trainees in this study were able to make an impact in the newsroom, they were asked to indicate if they were able to influence their supervisors or editors to publish environmental stories⁴³. Trainees were then asked to draw on their experiences and provide suggestions on the best ways to convince editors to increase and improve environmental news coverage. In addition, they were asked to provide suggestions on changes that need to be made in terms of media-related policies to ensure enhanced environmental news coverage.

One journalist explained that she does not attempt to influence her editors in this sense, since she was already overburdened with work. Two others clarified that they did not feel it was necessary to influence editors as their media organisations were already open to environmental reporting. Sixteen (34%), however, reported that they were able to influence their editors. Seven of these respondents, however, clarified that this was only to some extent. One said that she was usually successful in influencing her editor as long as the stories were non-controversial. For another, attempts to influence the editor had meant constant persuasions as well as arguments. Ten others (24%), on the other hand, said that they were not able to influence their editors.

Respondents provided the following suggestions on how editors and decision makers could be convinced to increase and improve environmental news coverage:

1. Thirteen (32%) suggested that editors could be convinced if they are shown the close links between environmental issues and other important areas such as business, social issues, economy, finance, politics, health issues and future development of the country. Six of these respondents highlighted the effectiveness of linking environmental issues with people. One, for example, said: “Focus on the human side of the story, avoid [having] too many scientific details in the story unless they [are] properly explained”. In the words of another: “Relate the stories to human tragedy, human needs and livelihoods, since environment for environment’s sake is often seen as frivolous.” Another suggested that connecting environmental issues with health issues, especially negative impacts on health, would draw editors’ attention.
2. Eight (20%) recommended that by using an attractive writing style that would draw attention, editors could be convinced to publish environmental stories. They noted that stories could be made attractive by using investigative journalism; making topics fashionable; making topics fresh and interesting; providing good analysis and opinions; writing comprehensively; and, sensationalising.
3. Four (10%) suggested that this could be done by showing editors that people are interested in such stories, hence increased coverage could increase readership.

⁴³ A few respondents found this question to be irrelevant to them as they were in editorial positions within their organisations.

4. Three (7%) highlighted the importance of communication with editors. One felt that patiently engaging in long discussions with editors would be effective while another noted the importance of being persuasive.
5. One expressed the opinion that the idea of “groundbreaking news” was often effective in convincing editors. He suggested: “Show them that the issue is the most important currently and that no other media is covering that story”.

Some respondents provided the following suggestions for media-related policies in order to increase environmental news coverage:

1. Five (12%) suggested the need for editorial policies that ensured allocated space for environmental news.
2. Two (5%) suggested policies that reduce the control of “advertising monopolies.” However, one of them pointed out that the reality was that being businesses with bills to pay, media organisations depended on advertising.
3. One suggested that policy makers involved in media-related policies should undergo an educational process in order to learn the importance of environmental news for society.
4. One suggested policy changes that would increase media independence.
5. One emphasised the importance of policies that ensured freedom of access to information.

One journalist pointed out that the extent of environmental reporting was influenced by political, historical and cultural aspects within a country. A country in the midst of political and economic transition, he said, tended to focus on politics and economy, with little space for environmental stories. In contrast, media organisations in a developed country with stable politics and economy are better able to emphasise environmental issues. He therefore emphasised that for environmental issues to take precedence, there first needed to be political and economic stability. In a similar way, another believed that improvements to media standards and a better economy would encourage more space for environmental news and consequently more employees in the media assigned to environmental issues. Another suggested that identifying the need in the public sphere for information on environmental issues would encourage media organisations to employ full time environment journalists.

In brief, although over a quarter of journalists in this study indicated that they were able to make an impact in the newsroom by encouraging their editors to increase coverage of environmental issues, others indicated an inability to do this. A small percentage believed that the establishment of editorial policies could ensure coverage of environmental issues. Still, others indicated that enhanced coverage may only come about with increased political and economic stability and increased public demand.

3.3.22 Impact on job satisfaction

To find out if the training affected feelings of job satisfaction, respondents were first asked to indicate how satisfied they were with their work in environmental reporting. They were then asked if the training impacted on their level of job satisfaction and to indicate other contributing factors.

As illustrated in Figure 3-33, at varying degrees, fifteen (37%) indicated a general satisfaction with their work. Still, thirteen from this group indicated that the training did increase their level of job satisfaction. One said that this was because he gained more respect within his organisation after the training. For another, the training led to a promotion; he said:

I am now bureau chief, in charge of the Southern Province of my country, which also has a lot of tourism activities that go side by side with environmental reporting. Management has since accepted my proposal for the introduction of [a] column dealing with tourism and environmental issues.

Twelve (29%) were somewhat dissatisfied with their jobs. Nine from this group indicated that the training did help increase their level of job satisfaction. A few clarified that this satisfaction derived from improvements to their reporting skills as a result of attending the training. For one, the satisfaction was a result of enhanced self-confidence after the training.

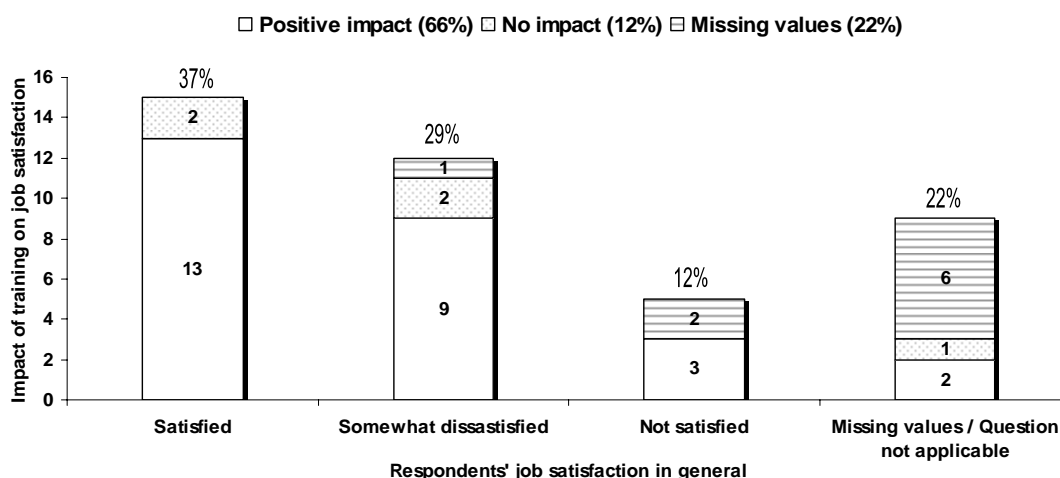


Figure 3-33 Impact of training on respondents' job satisfaction

Five (12%) reported that they were not satisfied with their jobs, because of a move away from environmental reporting (a field which they enjoyed) or a lack of opportunity to write environmental stories. Nevertheless, three from this group indicated that the training did contribute to increases in their feelings of job satisfaction. In the words of one:

Well, it has [enhanced my job satisfaction] drastically. For one, it has made me win another award in Sustainable Community Development Writing, in addition to making me an expert and a distinguished journalist in the...region.

In providing other contributing factors, eleven (27%) said that it was recognition of their work that was most satisfying. Other factors included: working with motivating people; being able to provide

a public service; salary; good colleagues; good working atmosphere; positive feedbacks and appreciation from employer and the public; motivations provided by employer; being able to set a trend for other media; freedom to do more environmental reporting; challenging tasks; career advancement opportunities; and, gaining expertise over certain issues. Kirkpatrick (1994) observed that conditions that can encourage change after training can be in the form of intrinsic rewards, such as, feelings of contentment, personal worth, and accomplishments; and, extrinsic rewards, such as, praise from supervisors, recognition, and financial rewards. Future impact assessments could be designed to find out the relation of such factors to journalism training.

In total, sixty-six percent of respondents (27) indicated that the training did have a positive impact on their job satisfaction. This was regarded as an important outcome, as increased levels of job satisfaction are likely to impact on job performances. The current findings also support Rogers' (2000) observation that environment reporters generally enjoy their work. Those not writing enough feel that they need to write more and those moved away from this field tend to become unhappy. None of the respondents in this survey reported problems with being labelled a "green reporter," which was contrary to what Ward (2002) observed among environment reporters in the United States, some of whom had found this to be derisive. Based on these findings, it is suggested that the mutually shared job satisfaction experienced by environment reporters could be highlighted in training programmes to further build on the solidarity between these reporters.

3.3.23 Impact on the trainers

All four reported that they experienced positive impacts, in terms of knowledge gained from their training experiences in different countries and from the trainees. One reported:

Meeting intelligent and educated journalists from different countries is yet another reminder that even issues which at home seem clear-cut and incapable of more than one interpretation can take on a different aspect when seen through the eyes of people who live in different circumstances and have different experiences.

This realisation, he added, helped him avoid a "dogmatic approach" when conducting training and to maintain an open mind, even when it came to environmental issues that he passionately cared about. The acquired understanding reinforced his belief in a training approach based on suggestions and guidance as opposed to a dictatorial approach.

The second trainer commented that he learned "how to do [his] job better" from the trainees, and that this helped him "substantially" in his training approach.

The fourth indicated that his experience as a trainer in "transitional societies in Central and Eastern Europe" and feedback from the trainees helped him "build a solid knowledge base of sustainability and environment issues as perceived by [these] societies". This understanding added to his

appreciation of the importance of the practical aspects in training that can provide trainees with actual reporting experiences and the importance of applying investigative reporting techniques to environmental journalism. He also came to the conclusion that it was necessary to clearly demonstrate “in the course of the training that the environment is not a secondary interest topic.” He further commented that

Empowering journalists’ access to environmental information and building their professionalism in investigating and covering nature protection issues has demonstrated the clear link of environment to social change, democracy and transparency, and the role of journalism...[in achieving these].

For the fourth trainer, what he learned from the trainees concerned the widely differing views about environmental issues, their importance, and their impacts. He also learned about the difficulties in raising environmental awareness in some countries where environmental issues tended to be ignored or deliberately suppressed. This acquired knowledge taught him “that one method [of training] does not suit all” and that it was necessary to be flexible. He also suggested the need for a training approach that is tailored to meet the needs of individual countries or regions. This observation was noted to be an important factor that would need consideration in international training programmes.

3.3.24 Impact on the organisation

Trainees were asked to indicate if changes in their environmental reporting as a result of attending the training had an impact on their organisation. In addition, indirect impacts in the newsroom were assessed based on three aspects. First, trainees were asked if they published any of the articles they produced at the training. Second, they were asked to indicate if they shared the course materials obtained at the training with their colleagues. Third, they were asked if they made an attempt to influence others in their organisation to do environmental reporting after the training.

As Figure 3-34 shows, while fourteen (34%) indicated the contrary, sixteen (39%) provided self-reported impacts that were indicative that changes in their environmental reporting as a result of the training did result in positive impacts on their organisations.

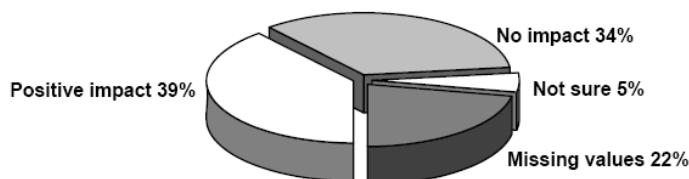


Figure 3-34 Impact on the organisation as perceived by respondents

One reported that she was able to have an impact on her organisation by coaching her colleagues to write more objectively. Another said that her training experience did result in positive organisational impact since her stories were written better, as measured by readers’ reactions. In a

similar way, another respondent assessed the impact he made, based on responses from readers when the volume of environmental news coverage increased. A fourth said that by focusing on the importance of the environment for human survival, his organisation became the leading newspaper in its region to cover environmental and sustainable development issues. He added that they received commendations from within the region and beyond. Another respondent indicated an even wider impact outside the state in which he practised. While participating in several meetings with other journalists, he shared the experiences he gained from the training programme and highlighted the wide possibilities in “reporting sustainable development as a new field”. One journalist provided a somewhat indirect impact on her organisation. The fact that she was sponsored to attend a training programme in environmental reporting, she believed, made her editors realise the value of environmental stories. This, in turn, increased the opportunities for her to report more extensively on the environment. This respondent believed that to be associated with Reuters and BFSI was a “stamp of authenticity” for the cause of the environment, and that this association made a huge difference in terms of environmental reporting being taken seriously within her organisation.

In addition, to impacts on their organisations reports provided by some respondents were indicative of impact on the community. One cited how she impacted the community through her reporting. Her attempt to educate viewers about a new environment-friendly product resulted in people calling in to find out how they could have the product installed in their homes. Another respondent said that he received an invitation from a local environmental group to present a paper on the topic – “The Role of Environment Journalists in our Society Today.” A third reported that he organised and formed a local environmental organisation after the training. In addition, he also conducted lectures on environmental topics at a secondary school.

Two respondents (5%) were uncertain if they caused an impact on their organisation. One thought it to be too early to say if there was an impact, since her organisation was only beginning to “warm up” to the idea that the environment could be incorporated as an area of specialisation. The other explained that it was difficult to gauge if she had any impact on her organisation as environmental stories were not recognised by her editors, and were hence not given prominence. Nevertheless, she believed that she did have an impact on the government agencies responsible for natural resources and the environment in her country. She added: “[I am] able to play a more effective role as a watchdog as my understanding of the issue increased. In the process, government agencies will be weary of an ‘enlightened and educated’ watchdog.”

Considering the possibility that those in the decision-maker category are likely to have a greater capacity for organisational impact, this group was compared with those in the employee category. A Pearson chi-square test found a significant difference ($\chi^2(1, n=30)=7.232$, $p=0.007$) between

these groups. It was observed that a higher proportion of respondents within the decision-maker category (10 out of 12) indicated that they did have an impact on their organisations compared to those in the employee category (6 out of 18) who indicated the same. One from the decision-maker category (an editor in his organisation) said that since it was his job to bring in new topics and to make decisions on what to write about, he was able to cause an impact on his organisation. He added: “I became more environment-conscious due to the [training], so my magazine had more environment topics.” Differing from Berger’s (2001) observation, however, this study did not find a significant difference between men and women in terms of self-reported impact on their organisations ($\chi^2(1,n=30)=0.820$, $p=0.365$).

As shown in Figure 3-35, illustrating an indirect impact in the newsroom, twenty-three respondents (56%) indicated that they did publish articles they wrote during the training.

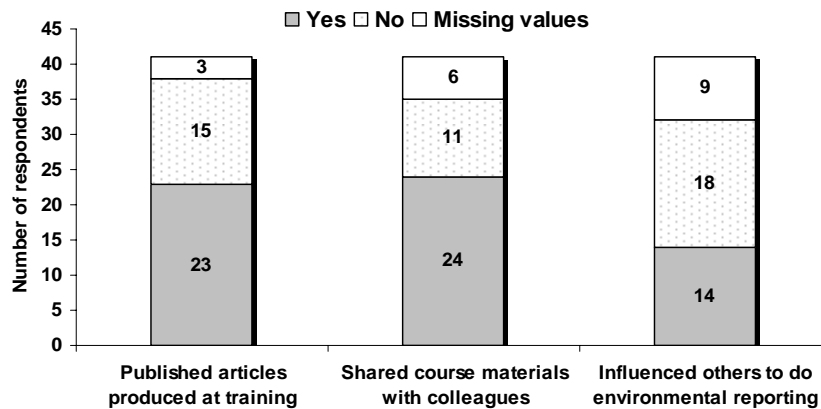


Figure 3-35 Indirect impacts in the newsroom

Fifteen (37%), in contrast, indicated that they had not. One explained that the articles she wrote were based on “made-up” information for the purpose of practice; hence, she did not publish them. Similarly, another explained that the articles were merely exercises and were not produced for the purpose of publication. Another respondent explained that the materials produced were not of interest to his organisation or its audience.

Although it was speculated that those covering environmental topics would be more likely to publish articles produced compared to those covering other areas, a Pearson Chi-Square test found no significant difference between these groups ($\chi^2(1,n=36)=0.264$, $p=0.607$). No significant differences between those in the decision-maker and employee categories were noted for this variable ($\chi^2(1,n=38)=0.391$, $p=0.532$). There was, however, a significant difference ($\chi^2(1,n=38)=5.886$, $p=0.015$) between those with and without prior training in environmental reporting, in terms of publication of information produced at the training. It was found that a higher proportion of respondents with prior training experience (12 out of 14) indicated that they published articles they produced at the training compared to those without prior training experience

(11 out of 24) who indicated the same. Prior training experience may have alerted participants about the publication potential of articles produced during training and may have caused them to focus on publishable articles in the subsequent training.

Illustrating a second indirect organisational impact, as shown in Figure 3-35, twenty-four (58%) indicated that they did share their course materials with their colleagues. One even took the trouble to copy the materials and make information packs for her colleagues. Another donated the reading materials he obtained from the training to his organisation's library. A third reported that she used the training materials in educational workshops to raise public awareness on environmental issues. Three reported that their sharing triggered the interest of their colleagues in the training programme and in environmental reporting.

A Pearson Chi-Square test found that there were no significant differences between the decision-maker and employee categories ($\chi^2(1, n=35)=0.276$, $p=0.599$) in the proportion of those who did and did not share course materials with others. However, a significant difference ($\chi^2(1, n=35)=5.407$, $p=0.02$) was observed between men and women for this variable. Contrary to Berger's (2001) observation, men in this study (12 out of 13) showed a higher tendency to share materials and knowledge with others compared to women (12 out of 22).

Demonstrating a third indirect impact in the newsroom, at varying degrees, fourteen (34%) said that upon return from the training, they did attempt to influence others in their organisation to do more environmental reporting (see Figure 3-35). A few indicated that they attempted this by sharing their experiences and regularly discussing with others about what they had learned. One said that he encouraged others to do more research on environmental issues for the purpose of triggering public awareness on the consequences of environmental pollution. Another indicated that she provided advice to junior reporters on how to approach environmental stories and helped edit their stories. Eighteen (44%), in contrast, indicated that they did not attempt to influence others. One explained that this was due to the fact that his organisation consisted of a small number of already fully-stretched staff. Six others explained that they did not make such attempts because their co-workers lacked interest in environmental issues. One, for instance, said that most journalists in her country did not think of environmental reporting as an important area, and that the generally held perception was that it was not an area that was financially fruitful as a career.

A Pearson Chi-Square test found a significant difference ($\chi^2(1, n=32)=9.791$, $p=0.02$) between those in the decision-maker and employee categories for the above variable. It was observed that a higher proportion of respondents from the decision-maker category (10 out of 13) indicated that they attempted to influence others in their organisations compared to respondents from the employee category (4 out of 19). A significant difference was also observed between men and

women ($\chi^2(1, n=32)=6.026$, $p=0.014$). Again, contrary to Berger's (2001) report, more men in this study (10 out of 15) attempted to influence others in their organisations to do more environmental reporting compared to women (4 out of 17).

In summary, although the training resulted in a certain degree of organisational impact, for some journalists, their ability to cause an impact on their organisation was constrained by factors such as receptiveness of co-workers, organisational capacity, and their editors' interest. In a previous study, Berger (2001: 4) observed that women trainees tended to have a bigger "impact on the newsrooms on their return from the course." In his study, Berger found that more women compared to men, said that they reported back to the newsroom and shared the course materials with their colleagues. Berger therefore suggested that training programmes with an objective to make an impact on the newsroom should prioritise women applicants for the training. Findings in this study were however contrary to Berger's as more men compared to women demonstrated an impact in the newsroom. Whether or not trainees' gender differences has implications for impact in the newsroom therefore remains inconclusive. It was however observed that a higher portion of respondents from the decision-maker category (mainly editors) indicated that they did have an impact on their organisations, and that they attempted to influence others in their organisations to do more environmental reporting, after the training. Drawing from this observation, it appears that knowledge building of those in the decision-making positions within a media organisation could result in a higher probability of organisational impacts. Comparably, Harrabin (2000) observed that seminars organised by *The Cambridge Media and Environment Programme*, that brought news executives and senior editors of the BBC in contact with sustainability policy makers and academicians in this field, contributed to improvements of BBC coverage of related issues. When trainees in this study were asked to identify who else in their organisation should attend a training programme on environmental reporting, ten from the employee category, and two from the decision-maker category identified editors, sub-editors and editors-in-chief. One journalist, for instance, said: "I think that it is very important that the editors and the ones who make decisions on what is published in the media, participate in such training". Another journalist, who attributed his lack in environmental reporting to his supervisors' lack of support and understanding, commented: "I suppose they should go through some training on [the] importance of environmental media coverage". Based on these observations, it is suggested that environmental training targeted at media editors and decision-makers could be an effective method to improve media coverage of S&E issues, as well as a measure to address the problems journalists face in gaining editorial support.

3.3.25 Unintended impacts

Possible unintended impacts of the training were determined in four ways. First, trainees were asked to indicate what else they gained from the training besides skills in environmental reporting. Second, they were asked to identify both the positive and negative unintended impacts of the training. Then, they were asked to note if they unexpectedly discovered anything about themselves or their skills after the training. Finally, they were asked if they learned anything from the other participants of the training.

As presented in Figure 3-36, in indicating what else they gained from the training, ten said that it was the establishment of a network of contacts. Ten also mentioned the international exposure and the opportunity to meet people from other countries and learn of their cultures to be something additional they gained from the training. For nine, it was the friends they made.

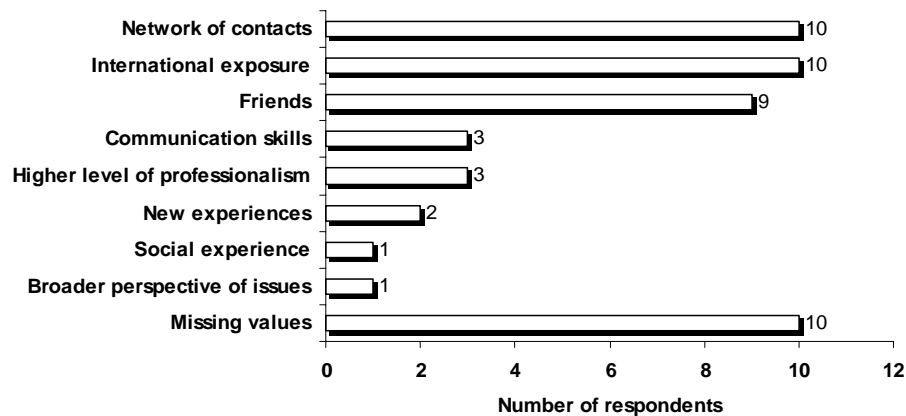


Figure 3-36 Other gains from the training as indicated by respondents

As illustrated in Figure 3-37, fifteen (37%) indicated that they did not experience any unintended impacts. For thirteen others (32%), the unintended impacts were generally positive considering the experiences they gained. One said: “I got an unexpected confirmation that most...environment journalists face similar problems as me”. Explaining that the training had made a seemingly technical and boring subject into something accessible and fun, another remarked: “I never thought I could enjoy writing on the environment so much”. Another noted that he gained knowledge on the problems experienced by the people of the country where the training programme was held. Exemplifying a positive unintended impact, one noted that the connections she established during the workshop led to her becoming a correspondent for an environmental magazine based in another country.

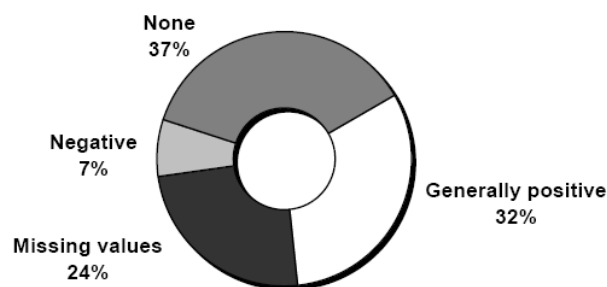


Figure 3-37 Unintended impacts of the training as indicated by trainees

Although minimal, the training resulted in some unintended negative impacts in the case of three journalists (7%). Indicating what may be interpreted as a mild negative outcome, one said that having been exposed to global perspectives in the training, he later felt that his job did not offer him big enough challenges. The exposure to the level of journalistic professionalism of a Western country and the significance of “journalistic work...in a world which respects information” made another realise that the situation of journalism in his country was quite the opposite. This contributed to feelings of frustrations experienced by this respondent. He felt that the “professional..., moral, organisational, and economical degradation of journalism in [his] country” was an obstacle to his personal and professional development. He also reported that his enhanced motivation for environmental reporting and his proposal for a weekly environmental section in his newspaper were received negatively by his employer. He explained that when he returned to his office after the training he was treated as if he had been away on vacation, and his editor unfairly assigned him to take on someone else’s work at the last-minute. He further commented that although his job had been to cover environmental issues and information technology, neither of these topics was allocated the space that he thought they deserved. The resentful reception by his employer resulted in his resignation soon after his return from the training.

In the third case, the respondent said that her supervisor simply ignored her when she returned from the training. She believed that this was due to her supervisor’s feelings of “jealousy” towards her. She further reported that her supervisor cut back her job scope. When previously her job had included editing, after the training, her supervisor decided that she was not to do this any more. Her supervisor’s attitude also made it difficult for her to share what she learned with her colleagues. Although her colleagues requested for an “in-house training,” her supervisor did not allow this. She commented: “Some bosses, I think, don’t want their subordinates to make improvements. I think they feel insecure when they see people learning and becoming experienced. Some of them want people they can control. My boss, unfortunately, was this way”. For this participant as well, her supervisor’s hostility eventually led to her resignation from her job.

Noting what they unexpectedly discovered, ten, as Figure 3-38 shows, said that they realised that their reporting and communication skills were better than what they had earlier perceived.



Figure 3-38 Unexpected discoveries as indicated by respondents

Two said that the training made them realise that they had previously overlooked the importance of some issues. One of them commented: “I have been missing out on many issues that I thought did not mean anything”. For another, it was self-awareness – she realised that she was not able to take criticism well, but has since learnt to deal with criticism. Another commented that she discovered that she had a liking for research.

Figure 3-39 illustrates what trainees learned from other participants of the training. Seventeen reported that they gained knowledge on the state of environmental issues and problems associated with environmental reporting in other countries. Five added that they also realised the similarities in the problems journalists face. Eight said that they picked up new skills and techniques from the other participants such as interview methods and writing styles.

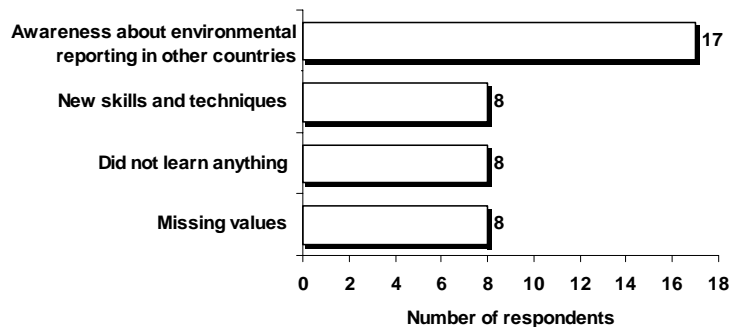


Figure 3-39 What was learned from other trainees as indicated by respondents

In summary, although unintended impacts of the training appeared to be largely positive in terms of additional knowledge and experiences trainees gained, negative employer receptions that eventuated in the resignation of two journalists in this study are a cause for concern. As Kirkpatrick (1994) suggested training organisers need to incorporate mechanisms within the training that can prevent such negative employer receptions.

3.3.26 Comparative analysis of impact as reported by trainees and by employers

Due to a high rate of non-response from employers, comparison of impacts as reported by trainees and employers was possible only in a single case. In this case, the employer reported similar impacts as indicated by the trainee in all areas but one. While the employer believed that the training enhanced the trainee's knowledge and understanding of sustainable development issues, the trainee indicated the contrary.

3.3.27 Considering the 'post-training period' in impact evaluations

To find out if variations in the time-frame between training and evaluation had an effect on reported impacts, a comparison was made between the impacts reported by trainees who attended the programme in Berlin (36 months post-training) and those who attended the programme in Budapest (6 months post-training). Comparison was made for five variables as shown in Figure 3-40. As was expected, a higher percentage of respondents who attended the Berlin programme, reported positive impacts and improvements compared to respondents who attended the Budapest programme.

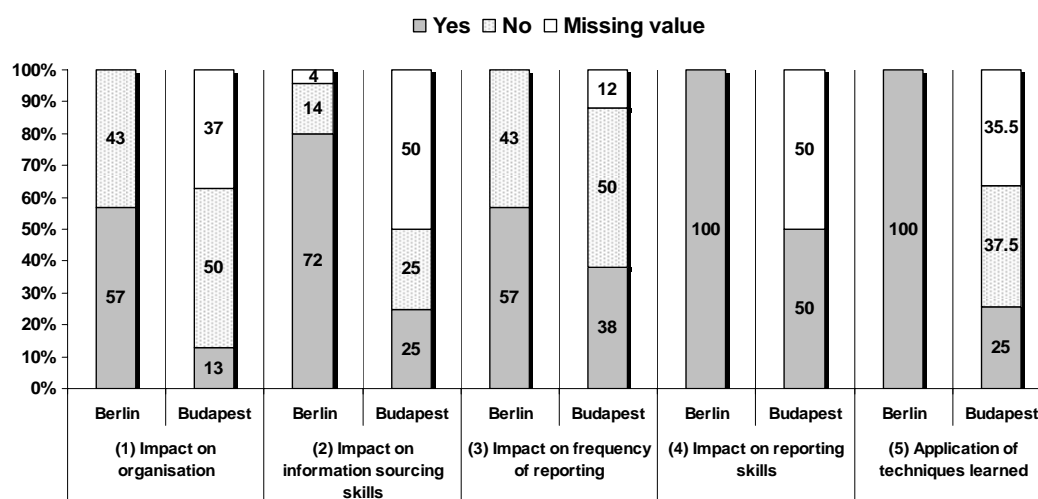


Figure 3-40 Comparison of impacts reported by respondents of the training programme in Berlin (36 months post-training) and respondents of the training programme in Budapest (6 months post-training)

There were a higher number of non-responses to questions among the participants of the Budapest programme – an indication that the evaluation may have been conducted too soon after the training. Akin to Berger's (2001) observation, trainees in this study who underwent the training six months prior to evaluation may not have had sufficient time to apply what was taught in the programme to be able to see the impacts on their job performances. In contrast, trainees of the Berlin programme had thirty-six months to put into practise what was learned and the time to further build on their knowledge and skills. It is thus suggested that thorough consideration be given to the post-training period in the design of long-term impact evaluations. In addition, it is important to note, that

evaluation with a prolonged post-training period would also mean that trainees are likely to have been exposed to a variety of other factors that may have also contributed to further enhancement of their journalistic skills and knowledge. In this study, this was addressed by requesting participants to indicate other causal factors to the changes in knowledge and skills that they reported.

3.3.28 Needs analysis in determining training objectives

Berger (2001) highlighted the importance of clearly defined training objectives for designing impact assessments since it ensures a more focused assessment. Berger also suggested that designing a training programme with the decision that it will be evaluated helps ensure that objectives are defined in a more measurable manner. In addition, Berger emphasised the importance for training objectives to be based on a needs analysis since “the impact of training is partially a function of clear identification of what needs to be impacted upon” (*ibid*: 28).

Trainers in this study were asked to indicate if a needs analysis was conducted prior to the design of the training programme, and to provide the selection criteria used to choose participants for the training. Two trainers confirmed that a needs assessment was in fact conducted. Three provided that selection of participants were based on their previous environmental reporting experience and number of years of work experience, and that an attempt was made to create a balanced group in terms of gender, nationality and media type.

Considering the lack of clarity of the objectives of the training initiative under study, participants were requested to indicate what they understood the objectives of the training to be and were asked to indicate if the training met their training needs. As illustrated in Figure 3-41, at varying degrees of accuracy, most trainees were able to provide an understanding of training objectives that resembled the core objectives provided by the training organisers.

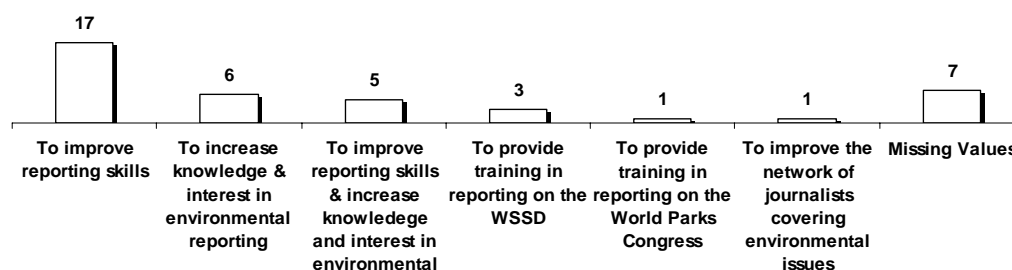


Figure 3-41 Objectives of training as indicated by respondents

A majority of ninety-three percent (38) affirmed that the training did meet their training needs (see Figure 3-42). Two added that they would not have had such an opportunity in their own countries. One, however, believed that the training was especially suited to reporters from the print media.

Nevertheless, she commented that the training was also a good opportunity for TV and radio reporters to learn how to write environmental news.

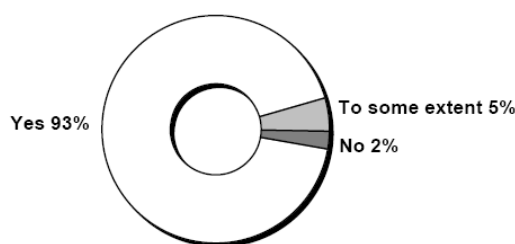


Figure 3-42 Responses to the question: Did the objectives of the Reuters-BFSD training programme meet your training needs?

Two (5%) indicated that the training met their needs only to some extent. One explained that the training did not meet her needs in terms of knowledge on environmental problems. She said: “I thought I would learn more about environmental problems, but that didn’t happen...it was more like training on writing general news, only we covered environmental issues”. Only one (2%) indicated that the training did not meet her needs. She found the training to be more suited for beginners.

In brief, it was observed that the training initiative under study did conduct a needs assessment prior to the design of the training programme. Perhaps as consequence of this, a majority of trainees reported that the training did meet their training needs.

3.3.29 Mechanisms to sustain training impact

It was assumed that one way to sustain and enhance the impact of a training programme would be to establish and maintain communication links between the trainees, and between trainers and trainees. To find out if the training initiative resulted in such communication links, trainers were asked if a network of journalists was established upon completion of the training programme and to indicate the extent to which they kept in contact with the trainees. Trainees, on the other hand, were asked if they kept in contact with the trainers and the other participants they met at the training. They were also asked to indicate if such contacts helped them in any way.

Two of the trainers affirmed that participants were encouraged to keep in contact with each other through the Reuters Foundation website and through existing regional networking initiatives for environment journalists. One trainer said that he did keep in contact with his trainees to a large extent; he said: “I have practically exchanged information and emails with all. Several have submitted articles to the magazine I edit.” The other three indicated that they kept in contact with their trainees to some extent.

As Figure 3-43 shows, fifteen trainees (37%) indicated that they did keep in contact with the trainers. Several, however, clarified that such contacts were not regular. Four mentioned that the contact was indirect via the Reuters website and the “Reuters Clinic.” The “Reuters Clinic” according to one respondent provides an opportunity for journalists to send in their stories to be edited by the trainers. However, one of the limitations of the services provided by the “Reuters Clinic,” as indicated by another was that the stories needed to be translated into English first.

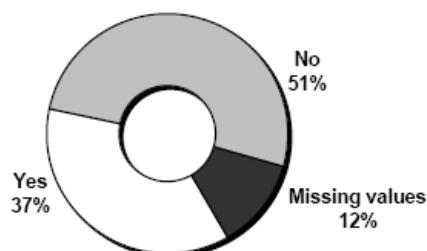


Figure 3-43 Response to the question: Have you kept in touch with the trainers of the Reuters-BFSD training programme?

As illustrated in Figure 3-44, a majority of thirty-three respondents (80%) kept in contact with other trainees in their programme.

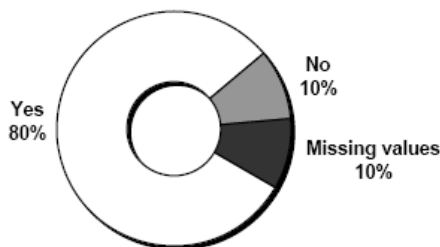


Figure 3-44 Response to the question: Have you kept in contact with the other journalists that you met at the training programme?

While three clarified that such contacts were at a social level, twelve reported that their contacts with other trainees resulted in the exchange of information which was useful for their work as journalists. In addition, three reported that keeping in touch with others resulted in sharing of information about opportunities for other workshops and training programmes. In the case of one journalist, contact with another trainee led to the development of a joint project between them for the establishment of an inter-country information network. Another commented that knowing how others dealt with their problems in environmental reporting helped him in dealing with his own problems in this field. These findings lend evidence to Berger’s (2001) observation on unintended impact of solidarity between journalists as a result of training programmes. Berger observed that an unintended impact that resulted from the multinational character of a training programme in Africa was that it increased awareness among participants on the media situation in other parts of the continent. Berger hence suggested that:

Elevating these significant – though unplanned – consequences into a formal course objective could lead to programme activity explicitly geared at promoting higher awareness and regional solidarity. To the extent that this in turn helps build an international network of journalists, it

could impact positively on media's role in democracy and development in southern Africa – which is part of the NSJ's *raison-d'être* (*ibid*: 5).

Similarly, Kelly (1999) observed a similar positive outcome – regional networks were established between environment journalists as a result of their participation in seminars. Kelly further commented:

The environmental journalist seminars, and the resulting networks of journalists, have been successful in increasing the media role in conservation efforts. In one example, after a South-North Journalist Exchange in British Columbia, journalists from Brazil, Mexico, Canada, and the United States wrote stories on local logging practices. Amid a spate of bad press, policy makers in British Columbia reduced their deforestation goals (*ibid*: 53).

Establishing communication links and encouraging participants to maintain contact with one another, following training programmes in environmental reporting, was therefore noted to be advantageous in sustaining impact resulting from the training.

3.3.30 Designing future training programmes in environmental reporting

To compile suggestions for the design of future training programmes in environmental reporting, trainers in this study were asked to highlight the strengths of the training initiative. They were also asked to indicate the problems they faced and the additional skills that they would require to further improve their skills as trainers. In addition, trainers and trainees were asked to provide suggestions for improvement to future training programmes in environmental reporting.

Three trainers indicated that the strength of the training lied in the vast experience and capability of the trainers. One elaborated:

These are all people with at least 15-20 years experience of active journalism before they reach the training-room. This makes a big difference. Because of their background, they are usually good at thinking laterally – seeing the implications in other areas of journalism. And they are, almost without exception in my experience, experienced and expert at communicating with people of different backgrounds and establishing rapport across social, national, religious or other differences. The ability to bring together journalists from a dozen different countries is also important in establishing a multi-faceted and mind-broadening forum.

Other strengths of the training as observed by the trainers included: “institutional experience and support from Reuters”; “up-to date selection of training tools and methods”; “the fact that it [was] based on real events”; and, the training’s “practical value.”

Three trainers indicated that they did not face any significant problems. The fourth, however, indicated that the “short time for preparation and recruiting candidates due to timing and funding uncertainties” to be problem he faced. He added that “group dynamics”, “facilitation skills” and “investigative journalism techniques” to be additional training skills he required. Another suggested that financial resources “to keep exercises updated, compose new exercises on new

themes”, and “assessment by a colleague who observes [the] workshop would be helpful” to trainers to “stay fresh and up-to-date.”

To improve future training programmes one trainer suggested that training should be conducted in local languages. Another suggested that “more field trips” could add to the value of the training “provided they are sufficiently interesting and newsworthy.” Trainees provided a variety of suggestions for the improvement of training programmes as shown in Figure 3-45.

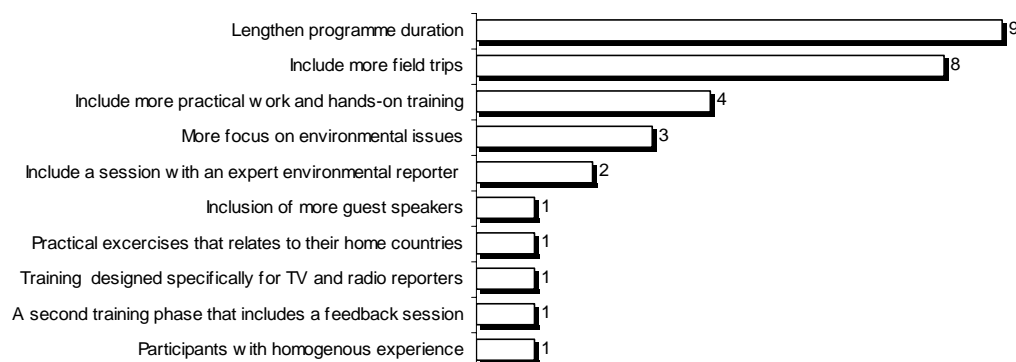


Figure 3-45 Suggestions for improvements to future training programmes as provided by trainees

Nine emphasised that the programme could be lengthened. Eight suggested that the programme could include more field trips. One of these respondents suggested that a visit could be made to a real media organisation such as the Reuters office, where trainees could have the opportunity to meet with practising journalists. Four suggested the need for more practical work and hands-on experiences. Three noted that there should be more focus on environmental issues. One of them suggested that the training should give more focus to the environmental problems in the different countries. One trainee observed that the group was too varied in terms of age and experience. She believed that this was a constraint for the instructor who finally chose to address the needs of those with less experience. She suggested that it would be more effective if each group is made more homogenous in terms of years of experience in journalism.

3.4 Conclusion and Recommendations

The findings in this study lend evidence to the long-term benefits that can result from mid-career training programmes for environment journalists. The training initiative, *Environment in the News: Realisation of a Media Initiative for Sustainable Development*, assessed in this study, resulted in considerable impacts in terms of improvements to trainees’ understanding of the term sustainable development; their overall knowledge of environmental issues; and, their skills in environmental reporting. At a lesser degree the training also positively impacted on trainees’ information sourcing and evaluation skills. The training initiative had therefore largely met its intended objectives.

In addition, the training resulted in other unintended positive impacts, such as, increases in the frequency of environmental reporting; motivation to specialise in environmental reporting; changes to personal views about environmental issues; and, even personal behavioural changes among some trainees. Over half also reported enhanced levels of job satisfaction after the training. This was regarded to be a particularly important outcome, since job satisfaction is likely to impact on job performance. Many found the international exposure, the established network of contacts and other experiences gained to be beneficial. Many also indicated that they acquired knowledge and skills from the other trainees in their programme. A large percentage of respondents applied techniques and approaches that they learned from the training to their work. Evidencing organisational impact, over a quarter affirmed that changes to their environmental reporting did cause an impact on their organisations, and over half indicated that they shared the course materials obtained from the training with their colleagues. Over half also indicated that they published the work they produced during the training. Over a quarter indicated that they did try to influence others to do environmental reporting, after completing the training.

Collectively, the above findings appear to support the ‘educational approach’ proposed in this thesis. These findings also serve as evidence that appears to support Scardamalia and Bereiter’s (2003; 2006) *knowledge building theory*. Such training programmes may in fact encourage journalists into a knowledge creating culture within the public realm. Considering the positive outcomes that can result from mid-career training in environmental reporting, it is suggested that there would need to be further investments in the ‘educational approach’ as a step towards improving the mainstream media’s coverage of S&E issues. In the same way, observing the success of the *Environmental Journalism Fellows Programme* offered at the National Tropical Botanical Garden in Kauai, Hawaii, Valenti and Tavana (2005: 308) stressed the importance of providing journalists with “a deep background in environmental science and tropical ecology” and the necessity for future efforts in providing similar and other forms of education for environment journalists. Likewise Mbuya (1992: 139) stressed that in order to improve environmental news reporting it would be necessary to conduct “seminars and workshops to acquaint journalists with the latest environmental information.” Mbuya observed that “a media workshop on the environment” organised by Botswana’s “local journalists association, BOJA, in conjunction with Panos” was “an eye opener for the local journalists who attended it. Since the workshop, there [was] a considerable improvement in coverage of the environment both in terms of space, prominence and quality of news reporting” (*ibid*: 139). Sachsman *et al.* (1988: 295) observed that training sessions and resource materials provided to less experienced journalists such as general assignment and local-beat reporters were well received; the reporters “learned the process of environmental reporting (interviewing, writing and editing), specific information about environmental issues...and the concept of scientific risk assessment.”

This study found that compared to those in the employee category, more respondents from the decision-maker category (mainly editors) indicated that they did have an impact on their media organisations and that they did attempt to influence others in their organisations to do more environmental reporting, after the training. Based on this observation, it may be argued that relevant training targeted at editors and decision-makers would be an effective measure to enhance environmental reporting within media organisations, as well as, to address the problems journalists face in gaining editorial support.

In addition to positive impact on trainees, the training initiative also resulted in positive impacts on the trainers. Trainers learned about the environmental situation and the status of environmental journalism in the different countries. This acquired knowledge helped them improve on their training approach, and brought about a realisation that there was a need for an adaptable approach to training reporters in this field.

Although it is likely that enhanced reporting skills and increased knowledge as a result of training may motivate reporters to want to report more on the issues, the actualisation of this would depend on the reception of their editors and supervisors. In this study, it was found that although employers were fairly receptive of the trainees, many respondents indicated editors' lack of interest to be one of the main problems they observed in their organisation. Some were requested to take on a different topic of reporting after the training; hence they were not able to apply what they learned from the training to their reporting work. Alongside positive impacts, two respondents described hostility from their employers when they returned to work after the training which led to their resignation soon after – substantiating Berger's (2003) remarks about employers' possible dislike for trained journalists. Berger cautioned that although media employers are stakeholders in media training, it should not be assumed that they will respond favourably to training initiatives. He noted:

In some cases they do not actually want better journalists in their employ. This is because better journalists may want more salaries, may reject bosses' interference in editorial content, or may embarrass powerful groups that can act against the owners. In many cases, employers also have such understaffed newsrooms that they cannot afford to spare a journalist to attend training. (*ibid*: 31).

In a previous assessment of journalism training, Berger (2001) observed that one-third of the trainees expressed frustration at not being able to apply their newly acquired skills and forty-two percent attributed this to newsroom conservatism. Considering this, Berger suggested the need for training of newsroom managers through courses, briefings or publications on how to make the best use of the training offered to journalists when they return to work after a training programme.

In light of the above, it is suggested that training organisers should keep in mind the five possible employer reception that trainees may face after training – *preventing, discouraging, neutral,*

encouraging and *requiring* – as described by Kirkpatrick (1994). Kirkpatrick emphasised that it is imperative “for trainers to know the type of climate that participants will face when they return from the training program. It is also important for them to do everything they can to see to it that the climate is neutral or better” (*ibid*: 24). Without this assurance, there is unlikely to be substantial positive outcomes of the training in terms of application of what was learned (*ibid*.). “Not only will no change occur, but those who attended the program will be frustrated with the boss, the training program, or both for teaching them things that they can’t apply” (*ibid*: 24).

It is thus suggested that future training programmes in environmental reporting incorporate mechanisms that could ensure positive employer reception towards trainees, and strategies to maximise trainees’ acquired skills and knowledge within the newsroom. Kirkpatrick (1996) suggested that involving employers in the development of the training programme, for example in the needs assessment process, and inviting their comments and suggestions on programme contents could help ensure that trainees will be received more positively after the training. In this way, there is room for trainers to ask employers to provide an *encouraging* climate when trainees return to work (*ibid*.). Such employer involvement may also ensure the practicability and relevancy of concepts, principles, and techniques taught in the training (*ibid*.). Moreover, knowledge of supervisory inputs into the training programme could also increase the motivation to learn among trainees and enhance their enthusiasm to apply their newly acquired skills and knowledge to their work (*ibid*.). In addition to the above advantages that Kirkpatrick noted, employer involvement may also increase their commitment to the training’s impact evaluation, and poor responses to evaluation questionnaires (as was the case in this study) would be less likely.

At this point, an indirect inference may be made about the relevance of the ‘social responsibility approach’ (the second approach to improvement that this research examines in its third case study in Chapter 5) for the viability of the presently examined ‘educational approach.’ It may be argued that a greater sense of social responsibility on the part of the mainstream media towards a role in communicating S&E issues may address some of the problems connected to employer receptions towards trainees that this case study observed. As has been detailed in the preceding two chapters, media’s social responsibility in this area may be expressed in two forms – through a *principle of media responsibility in environmental education* or through *media environmental policies*. Such a principle or policy, when in place within a media organisation, is likely to cause media decision makers to be more supportive towards building journalists’ knowledge as a means for achieving improvements to their organisation’s coverage of S&E issues.

Furthermore, it is suggested that media employers could be sensitised about the importance of making the best use of trainees’ acquired skills in environmental reporting. An information pack could be sent to the supervisors informing them about the knowledge and skills that trainees have

been provided and suggestions on how their organisation could best benefit from it. Suggestions may include the sharing of knowledge and skills with co-workers; specialisation in environmental reporting; and, other improvements to environmental news coverage. Such an information pack could also include information that could serve to bring about the realisation among media organisations of the significance of environmental news reporting. Taking into account Kirkpatrick's (1994) suggestions, a "learning contract" could also be prepared at the end of the training session, and a copy could be given to the employer of the trainees. Provided that it doesn't deter participation, a more rigorous candidate selection process, whereby admission is contingent on the production of a number of sustainability stories within a given time frame, may also be employed to overcome the problem of non-application of what was learned as a result of changes to journalists' reporting area.

In addition, Berger (2001: 6) suggested the need for topics such as "managing your boss" and "transforming newsroom culture" within a training programme. Further discussing the problems of employer reactions to training programmes, Berger (2003: 31) noted:

[E]mployers' frequent low interest in training could be addressed if impact assessment could show that training makes for more productive journalists, fewer legal and libel cases, more attractive content to audiences, etc. In addition, if training courses can – during their operation – also simultaneously yield stories to feed the hungry news machine, that too could help address some employer concerns.

In line with Berger's above remarks, one respondent in this study suggested that in the practical exercises of the training, trainees should be encouraged to write local stories that relates to their home countries (see Figure 3-45). It is therefore recommended that all exercises in training programmes be based on facts relevant to trainees' organisations and countries. This increases the publication possibility of articles produced at the training programme, and hence a higher potential for triggering an impact in the newsroom. Such published articles can also open the eyes of editors and media decision-makers to the value of training in environmental reporting.

While the objective of the training and the approach used by the trainers had emphasised fact-based, objective reporting, trainees, on the other hand, provided varying views on the type of reporting that was suitable for their countries. One-third indicated a preference for advocacy journalism. A majority were also supportive of the idea of an alternative approach to environmental reporting that Detjen (2002) referred to as *sustainable journalism*. This observation suggests that there may be a need for a redefined approach to environmental reporting that addresses the issues of objectivity and advocacy in environmental reporting. It is also suggested that participants may benefit from a session in the training that discusses the objectivity-advocacy debate. Journalists could be alerted of the advantages and risks of the two reporting approaches, some of which are detailed in Section 2.13 of this thesis. Nelson (1995), for example, cautioned that reporters who become advocates risk losing their credibility and that media audience may disregard a story as

mere propaganda if they sense reporting bias. Frome (1998: 34), on the other hand, believes that environment journalists should reach “beyond objectivity to examine the world and the universe from the heart as well as the head.”

Because of cultural, social and political variations between countries there are likely to be differences in the practice of journalism between countries. Robie (2001), for instance, observed differences in news values between Western countries and less developed countries. He noted that unlike news in the first world, news in second and third world countries contained educational and developmental aspects. According to the *Asian Mass Communication Research and Information Centre*, the press system in Asia is often based on the local culture, customs and traditions; therefore, Western press theories are not readily applicable in Asian societies (Friedman and Friedman 1989). Friedman and Friedman (1989: 8-9) observed that most Asian journalists

believe the media are central to cataly[s]ing widespread public participation through improving public awareness and providing environmental education...To some planners and decision makers, the future of the Asian environment rests as much on journalists' shoulders as it does on those of national leaders. Many consider journalists to be important guardians of the environmental commons for future generations because they help shape public opinion, particularly that of decision makers.

Robie (1995) observes that in comparison to journalists from affluent countries like Australia and New Zealand, journalists from developing countries in the Pacific have a greater responsibility in addressing social concerns such as poverty and illiteracy. Ka'au (1995) maintains that environment journalists in the Pacific have an added responsibility because they are dealing with a field that concerns people's livelihoods.

Such differences hence need to be taken into account in international training programmes in environmental reporting to ensure the practicability of the reporting style taught. Considering some of the problems trainees in this study faced in terms of applying the style of reporting taught, and the differences in the practice of journalism between countries, it is recommended that future international training programmes in environmental reporting take into account the practicability of the style of reporting taught in the context of cultural, social, and political differences between countries. It may be appropriate to include a session in the training programme that discusses various approaches to environmental reporting, their implications and their relevance to the home countries of the trainees.

As has been discussed in Section 2.13, there are differences in view with regard to objectivity in environmental journalism. While most suggest that environment journalists need to uphold objectivity, in contrast, some have pointed out the difficulty in adhering to this principle. Because of such differences in perspective, the possibility of variations in training objectives and approach depending on the background of the training organiser was noted. A news organisation such as *Reuters Foundation* may emphasise objectivity as an important aspect of environmental journalism

(as was the case in the training programme under study) while training organised by environmental interest groups may employ approaches that are likely to be less ‘objective’ in nature. Seminars organised by *Conservation International* for instance, showed journalists “how the media can play a role in shaping environmental policy” in addition to “providing environmental information” (Kelly 1999: 53). A training programme on environmental reporting titled *Making Green News: Towards a Balanced Environmental Reporting*⁴⁴ co-organised by the *World Wide Fund for Nature* (WWF) for journalists in Malaysia, focused on enhancing journalists’ interest and enthusiasm for what WWF had identified to be urgent environmental problems in the country. The long-term objective of the training was to increase environmental news coverage in the media. The training team had comprised of passionate environmentalists, environment reporters, as well as staff of WWF, who provided in-depth information and insights into the identified problems. In contrast, while the training assessed in this study aimed to impact on trainees’ knowledge and reporting skills, it had not aimed to impact on the amount of environmental reporting nor did it aim to show journalists how environmental reporting might shape environmental policies. To gain better understanding of training programmes in environmental reporting and their impact, it is proposed that future research should address differences in training objectives and approach through comparative assessments of different training initiatives by different parties.

A clear and broad understanding of sustainability was regarded to be crucial for effective reporting on related issues. Considering the complexity of sustainability concepts and initiatives, as detailed in the introduction chapter of this thesis (Section 1.4) and in the literature review in Section 2.3, and the possibility that not all trainees would have a clear pre-existing understanding of related terminologies, a special session devoted to the discussion of terms such as *sustainable development* and *sustainable consumption* could be included in future training programmes. A large percentage of respondents in this study indicated that their understanding of the term *sustainable development* did have an affect on their reporting. While lack of knowledge or understanding of the term prevented reporting on the subject, increase in understanding, on the other hand, increased the quantity and quality of their reporting. It is argued here that in order for journalists and reporters to communicate sustainability effectively to the public they first need to be well equipped with a clear understanding of not only what sustainability means, but also a deep understanding of its complexity and methods for its accomplishment.

Furthermore, journalists need to be trained on how news messages about sustainability might be framed more effectively. In Section 2.12, we saw that environment journalists are constrained not only by the complexity of the subject matter they are covering but are also constrained by the

⁴⁴ “Making Green News” was jointly organised by WWF-Malaysia and the Asia-Pacific Institute for Broadcasting Development (AIBD) between 6 and 30 May 2002 in Malaysia. See www.wwfmalaysia.org for further details.

norms and traditions of the news production process. Yang (2004) observed that journalists are subject to journalistic routines almost at a subconscious level. This could be an important area to address in environmental journalism training. For instance, by using case studies that show how specific journalistic routines may affect the framing of environmental news reports and their consequences on public understanding and views, journalists' awareness of this process may be enhanced, which in turn may contribute to improvements to future news reports. This suggests the need for the application of the 'message framing approach' in designing contents for training programme in environment journalism. This is particularly important since, as will be further detailed in Chapter 6 of this thesis, the 'message framing approach' is a potentially effective method for improving mediated communication of S&E issues in the news media as this approach appears to provide a way for enhancing message effectiveness. This seems to be an area that requires further research – well established methods for improving the framing of S&E news may then be included in training and education programmes in building journalists' news reporting skills.

Trainers in this study confirmed that the training was based on a prior needs assessment. A majority of respondents indicated that the training programme did meet their training needs. A small number, on the other hand, found that the training did not meet their needs. To maximise training outcomes, it is recommended that a thorough needs assessment be conducted prior to organising training programmes in environmental reporting. Training needs could be divided into two large areas – the needs of reporters who have good knowledge on S&E issues but lack journalism skills, and the needs of reporters who have basic journalism qualifications but lack knowledge on S&E issues. In determining training needs, reporters could also be categorised as those already specialising in environmental reporting and seeking to enhance knowledge and scope, and those specialising in other areas and seeking to gain an understanding of the S&E aspects of their respective areas. Needs assessment conducted prior to training programmes could help in distinguishing between these groups. Training programmes could then be tailored to meet these specific needs in a more effective manner. In addition, as Berger (2001) noted, such needs assessment ensures that objectives of the training are defined more clearly and facilitates a more accurate and systematic impact assessment plan.

As mid-career training programmes are often costly to organise, mechanisms need to be incorporated to ensure the sustenance of training impacts. One way to sustain training impact, as identified in this study, is the establishment of networks of journalists. Impact of training programmes could also be magnified by using a train-the-trainer approach. The trainee is provided with the necessary skills and teaching materials to train others in either their own media organisation or groups of reporters in their region. In-house training especially may be carried out

with minimal additional resources. The use of a train-the-trainer approach ensures that the impact of training does not end with one individual journalist.

In addition, all training initiatives including any in-house training conducted by a trained journalist needs to be evaluated. For a systematic evaluation of training programmes in environmental reporting an evaluation system should be in place prior to the conduct of the training. This may enhance the possibility of employing more advance methods of impact assessment. As Berger (2001) has suggested, an evaluation of a training programme should begin before the start of the training, carried out throughout the training and continued long after the end of the training. Long-term evaluations are especially necessary to gain convincing proof of training outcome. By identifying both positive and negative outcomes, evaluation can provide essential information for improvements to future training contents and justify the need for future training initiatives.

Overall, the training initiative assessed in this chapter did meet its intended objectives and resulted in various positive unintended outcomes; thus, providing support for the 'educational approach' proposed in this study. Mid-career journalism training programmes in environmental reporting are therefore identified as an important prerequisite for improvements to mainstream media coverage of S&E issues. However, this study also noted that for the majority of these journalists the training programme they underwent was the first of such training they had ever attended. As it appears, such training programmes have been ad-hoc and usually organised by non-governmental organisations and international institutions. Furthermore, as has been pointed out in Chapter 2, many have previously observed the lack of mid-career training in environmental reporting (e.g. Dennis 1991; Detjen *et al.* 2000; Friedman 1983; Friedman 1994; Friedman and Friedman 1989; Mbuya 1992; West *et al.* 2003; LaMay 1991; Vestal and Briers 2000; Yang 2004). Despite being a desirable approach, the viability of mid-career training as an educational approach to achieving improvements to news media coverage of S&E issues appears to be dependent on various other factors such as the availability of training sponsorship and the availability of journalists' time to participate in such training programmes. On the other hand, as we will see in the following chapter, the inclusion of sustainability as a topic within the curriculum of a tertiary journalism programme, addresses some of the above limitations of mid-career training programmes, and offers an 'educational approach' to improvement that is likely to be more enduring.

Chapter 4

Impacts of a Pilot Journalism Module on Sustainability: A Further Exploration of the ‘Educational Approach’

“...the intellectual resource of knowledge is very simple to access – you need one basic principle, education. Education is the key to knowledge, which is the key to productivity, which is the key to technology, which just may hold the key to everything else”
(Froehlich 2001: 108)

4.1 Introduction

That education is the key to everything as Froehlich (2001) has suggested may be subject to debate. Nevertheless, the ‘educational approach’ of providing appropriate education for journalism students may indeed be an important key to improving mainstream news media coverage of sustainability and environmental (S&E) issues. The case study in the chapter preceding this provided an appraisal of the ‘educational approach’ within the context of mid-career training programmes in environmental reporting. It was observed that the training initiative resulted in overall positive impacts although the viability of this approach appeared to be dependent on other external factors. This chapter will provide a further exploration of the ‘educational approach’ within the context of tertiary journalism education. This further exploration was called for considering the possibility that such education might address some of the limitations of the mid-career training approach. For instance unlike the uncertain availability of mid-career training programmes, the inclusion of S&E issues within a university journalism programme appears more capable of ensuring that all graduating journalists have background knowledge of these issues. Their organisation is less likely to be dependent on sponsorship, and as it involves a captured audience of a classroom of students, time availability is unlikely to be a deterring factor to their attendance. The ‘educational approach’ is one of three approaches to improving news media communication of S&E issues that this thesis set out to explore. The case study in Chapter 5 will provide an exploration of the ‘social responsibility approach’ by gaining feedback from working journalists and media managers about their receptiveness towards a more responsible role in communicating S&E issues. The final case study in Chapter 6 proposes and tests the ‘message framing approach’ to achieving the intended improvements which focuses on the strategic framing of messages about sustainability based on theories on effective and persuasive communication. Chapter 7, the concluding chapter of this thesis, draws together the key findings of the four case studies and provides an overview of other interrelated factors that would need to be taken into for the successful application of these approaches in the real world.

Considering that New Zealand is at present faced with a variety of S&E issues (some, such as the issue of global warming that requires address from an international perspective), it is a reasonable argument that there is a growing need for accurate public information of these issues through its mainstream media. However, as has been addressed in Section 2.12, despite the complexities of environmental journalism, journalists are rarely trained or educated in this field. In addition to the general lack in mid-career training in environmental reporting (Dennis 1991; Friedman 1983; LaMay 1991; Mbuya 1992; West *et al.* 2003), journalists' lack of background knowledge in this field is made worse by the lack of environmental journalism education at the tertiary level (Freedman 2004; Casey 1998; Friedman 1994). It is usually the case that many young journalists enter the field without having taken any environmental journalism courses at the undergraduate level (Friedman 1994)

Nevertheless, there has been some increase in the prominence of environmental journalism programmes in U.S. universities (Griffin and Schoenfeld 1982; Freedman 2004). Akin to mid-career training in environmental reporting, as we have seen in Chapter 3, advancements in tertiary level programmes in environmental journalism may add to the *knowledge building* process of journalists in this field. However, the impacts of tertiary programmes in environment journalism have hardly been addressed in related literature. By providing an account of how the inclusion of a module on sustainability into a tertiary level *Graduate Diploma in Journalism* programme impacted on students' understanding, perceptions, interest, and their future job performances as journalists, this chapter examines the viability of the 'educational approach' as a method that might be employed to improve news media communication of S&E issues. This chapter also provides recommendations for the design of such tertiary level programmes.

While Friedman (1994), and Griffin and Schoenfeld (1982) have previously investigated the inclusion of environmental subjects within journalism courses in the United States, and Freedman (2004) observed the lack of environmental journalism courses in Uzbekistan, no comparable studies have been previously conducted for New Zealand. While some studies have examined the integration of sustainability in the curricula of tertiary institutions in general (e.g. Down 2006; Moore 2005; Pearson *et al.* 2005; Sherren 2006; and, Thomas 2004), no studies that examined its inclusion specifically within the field of journalism were found. In light of this lack, a subset of this case study provides an assessment of the extent to which sustainability and environmental issues reporting are included in the curricula of journalism programmes in New Zealand institutions of higher education. This was regarded to be important for an overall assessment of environmental journalism, as Griffin and Schoenfeld (1982: 5) have noted, "such schools and departments...[are] responsible for the preparation of many of the mass media people charged with investigating and interpreting environmental issues."

4.1.1 Inclusion of environmental and sustainability aspects within journalism education: an identified need for improvements to related news coverage

Orr (1996: 7) asserted that “educating for the environment” was the century’s challenge for institutions of higher education because:

The disordering of ecological systems and of the great biogeochemical cycles of the Earth reflects a prior disorder in the thought, perception, imagination, intellectual priorities, and loyalties inherent in the industrial mind. Ultimately, then, the ecological crisis has to do with how we think and with the institutions that purport to shape and refine the capacity to think. The ecological crisis, in other words, is a crisis *of* education...

Friedman (1994: 12) attributed the many problems in environmental news coverage such as “narrow choice of information sources, avoidance of scientific and technical information and lack of in-depth reporting and follow-up” partly to a lack of environmental journalism courses at the undergraduate level. In a similar way, Casey (1998: iv) attributed the poor quality of environmental news coverage to inadequacies in the journalism curricula and noted that “universities are being blamed by editors [and] publishers...for providing irrelevant education and delivering incompetent products.”

Considering that journalists often start work immediately after education, Casey (1998: 11) proposed the need for improved undergraduate level “training and education of future environmental reporters and communicators”. Likewise, Friedman (1983) stressed the importance of providing education in environmental reporting for journalism students before they start work as professionals. She observed that while reporting on public affairs was a required course component at most journalism schools, it tended to be focused on “courts, police, and city council meetings” (*ibid*: 29). While she acknowledged the importance of these areas, she stressed that it was also necessary for journalists to cover other fundamental aspects of a community’s existence. Considering the seriousness of environmental problems in the present era, she stressed that the environment needed to be prime among other areas in journalism programmes.

While Friedman (1983), Friedman (1994) and Casey (1998) have argued that the inclusion of environmental reporting within journalism programmes was essential for the improvement of environmental journalism, more recently, others (e.g. Detjen 2002; Harrabin 2000; Parker 2003b; Smith 2000b; Voisey and Church 2000) have emphasised the necessity for improved media coverage of sustainability issues. Leal and Borner (2005a: 12) asserted: “Journalism educators need to realise that reporting on sustainable development should be an essential part of the curriculum and should be a required course at...journalism schools.”

In contrast, others have contested the concept of ‘education for sustainability.’ Jickling (1992), for example, did so in an article entitled “Why I Don’t Want My Children To Be Educated for Sustainable Development” in the Summer 1992 issue of the *Journal of Environmental Education*.

Because it was described in the term ‘education *for* sustainable development’, Jickling argued that this was “suggestive of an activity like training or the preparation for the achievement of some instrumental aim” (*ibid*: 7). He pointed out that such a position was based on two questionable assumptions:

First, sustainable development is an uncontested concept, and second, education is a tool to be used for its advancement. The first point is clearly untrue and should be rejected; there is considerable scepticism about the coherence and efficacy of the term. The second assumption can also be rejected. The prescription of a particular outlook is repugnant to the development of autonomous thinking (*ibid*: 7-8).

Jickling further argued that “education is concerned with enabling people to think for themselves” and that ‘education *for* sustainable development’ was incompatible with this principle, as it suggests a “predetermined mode of thinking to which the pupil is expected to prescribe” (*ibid*: 8).

Wals and Jickling (2002: 222) later restated this view; they maintained that “education for sustainability” was in opposition to “prevailing conceptions of education” which they say,

breathes a kind of intellectual exclusivity and determinism that conflicts with ideas of emancipation, local knowledge, democracy and self-determination. The prepositional use of “for” prescribes that education must be in favor of some specific and undisputed product, in this case sustainability. At the same time, an emphasis on sustainability, or sustainable development, might hinder the inclusion of other emerging environmental thought such as deep ecology and ecofeminism.

Cartea (2005) strengthened this view when he argued against the replacement of environmental education with the more recent call towards ‘education for sustainability.’ In comparison to the former which he observed to be a historically well-established field, ‘education for sustainability’, contains theoretical inconsistencies, as well as political and ideological biases.

While Thomas (2004) identified the abstract nature of sustainability to be an impediment to its inclusion in the tertiary curricula, Wals and Jickling (2002: 230) argued:

The fact that ‘sustainability is a messy, ill-defined concept gives universities the opportunity to grapple with the concept and develop new ways of thinking about the concept. Sustainability provides colleges and universities an opportunity to confront their core values, their practices, their entrenched pedagogies, the way they program for student learning, the way they think about resources and allocate these resources and their relationship with the broader community.

Bosselmann (2001: 184) asserted: “The case for implementing sustainability in the university curriculum is a strong one. As central institutions of inquiry and education universities are bound to participate in the global sustainability discourse.” In a similar way, despite implementation problems, many have iterated and emphasised the role of tertiary educational institutions in educating for sustainability (see for example: Buchan *et al.* 2007; De Ciurana and Leal Filho 2006; Vargas 2000; and, Wright 2002). The *Talloires Declaration*⁴⁵ composed in 1990 – a ten-point plan

⁴⁵ The declaration is available at the website of the Association of University Leaders for a Sustainable Future available: www.ulsf.org.

of action (at present signed by over 320 universities worldwide) that requires the commitment of institutions of higher education to the teaching and practice of sustainability; the establishment of the *International Journal of Sustainability in Higher Education* in 2000; and, the declaration by the United Nations of the years 2005-2014 as the *Decade of Education for Sustainable Development* have all also added to the significance of sustainability education.

4.1.2 The introduction of a module on sustainability to the curriculum of the Graduate Diploma in Journalism Programme at University of Canterbury

In recognition of the importance of reporting on S&E issues in New Zealand, an introductory module on sustainability was added to the curriculum of University of Canterbury's *Graduate Diploma in Journalism* programme in the academic year 2005. The sessions for the module were proposed and organised by the late Mr Nick Early (Restore NZ Ltd) and Professor Ian Spellerberg (Lincoln University) and accepted into the curriculum of the diploma programme by Associate Professor Jim Tully (Head of School of Political Science and Communication, University of Canterbury). The module consisted of presentations by four guest speakers⁴⁶ over four subsequent weeks from 26 July, 2005 to 16 August, 2005 in the second term of the programme. The speakers provided a variety of perspectives of S&E issues in New Zealand. Each session consisted of a presentation of approximately one hour followed by a half-hour discussion with the students. Contents of the sessions are provided in Appendix 5.

4.2 Methods and research design

Considering the general lack of literature on impact assessment methodology for journalism training (Berger 2001; Berger 2003; Becker *et al.* 2004) Section 3.2 of the preceding chapter provided an appraisal of available methods that may be considered for conducting such impact assessments. Reviewing these available methods, the *one-group pre-experimental design* was selected as one that was the most viable for the present case study. The following sections 4.2.1 - 4.2.7 describe the rationales behind the selection of this method, its associated limitations and measures taken to address those limitations, and the overall process employed to assess the impacts of above module. Methods used for assessing the status of integration of sustainability in the curricula of journalism courses in New Zealand universities and colleges is provided separately in Section 4.2.8.

⁴⁶ The speakers were Helen Beaumont (Representative of New Zealand's Parliamentary Commissioner for the Environment); John Peet (former academic at University of Canterbury); Guy Salmon (Ecologic Foundation) and Jeanette Fitzsimons (Green Party Co-leader).

4.2.1 The target population: Journalism students

Acknowledging Ryan's (1998) criticism on the lack of representative strength in mass communication research that use students as sample populations, it is clarified that in the case of this research, the journalism students under study were themselves the population of interest. However, considering the small sample size, findings in this study are treated as preliminary and may not be representative of journalism students in general.

4.2.2 Recruitment method and response rates

Prior to the start of the module, on 11 July 2005, Associate Professor Jim Tully (co-ordinator of the *Graduate Diploma in Journalism* programme) made an announcement about the assessment and this was followed by a brief introduction about its objectives by the researcher. Students were given an information sheet that provided the research objectives, clarified the voluntary nature of participation, and assured confidentiality. An interview schedule was left in the classroom, for students to select an interview time with the researcher. The researcher also interacted personally with students to encourage participation.

The *Graduate Diploma in Journalism* is an intensive programme where students are often required to complete assignments within tight deadlines. Students' lack of time availability was hence identified to be a potential obstacle to their participation in this impact assessment. To encourage participation, students were later provided the option of either participating in interviews or filling out a questionnaire on their own time. Of the nineteen students in the programme, eleven volunteered participation, generating a response rate of 58%. Seven students were interviewed while four filled out a questionnaire containing the exact questions that were used in the interviews. To minimise *instrumentation effects*, the pre-course and post-course evaluations involved a constant type of measure, i.e. either interviews for both or self-administered questionnaires for both. All interviews were recorded and transcribed. In cases where students opted to fill out a questionnaire, misunderstandings and unclear answers were clarified through follow up questions by e-mail.

4.2.3 Testing module impact: A one-group pre-experimental design

Although, as acknowledged in the Section 3.2.2 of the preceding chapter, the controlled experimental design is advantageous in that it provides a more reliable way for associating observed impacts to the independent variable (i.e. the treatment), its application was not feasible for this case study due to the circumstances in which the module was implemented. A *no-treatment concurrent control* was not possible since all students attended the module sessions and the batch of students under study was the only one for the year. Randomisation was not possible as the

population consisted of a small class of nineteen students. A true experimental design was thus not possible. Instead, a *one-group pre-experimental design* (sometimes referred to as a *one-group pre-test post-test design*) was employed to evaluate the impact of the sustainability module on three dependent variables: (1) students' understanding of sustainability; (2) their interest in reporting S&E issues; and, (3) their personal beliefs about sustainability. Hernández (2000: 63) observes that the *one-group design* is frequently used in education and communication research, in particular "when an intervention affects a specific target group." However, Hernández (2000) and Leary (1991) pointed out that in spite of its popularity, the *one-group design* is often regarded as a poor experimental design because of its inability to eliminate confounding factors that threaten internal validity. "For example, it does not clearly establish that the intervention caused the measured change in the population. Other variables may have caused any differences detected between the two measurement points" (Hernández 2000: 63). Consequently, it would be difficult to say for sure that changes observed were due to the experimental treatment (Leary 1991). Nonetheless, Robson (2002) pointed out that the deficiencies of the *one-group design* is of concern only when it is regarded to be an experimental design. "If the concern is simply to determine whether there is an increase of performance after a treatment, or even to assess its statistical significance" he says, "there are no particular problems" other than possible validity threats (*ibid*: 137).

4.2.4 The evaluation instruments

Considering the exploratory nature of the enquiry, a qualitative approach with mainly open-ended questions was employed to allow a flexible examination of impact on the students.

For each student, using the pre-course evaluation results as baseline measures, post-course evaluation results were used to determine if there were changes in the three dependent variables under study.

In addition, the pre-course evaluation also included four questions to identify potentially confounding *participant variables* – (1) prior media-related work experience; (2) previous experience of having work published or broadcasted; (3) prior experience in writing environmental or sustainability stories; and, (4) prior training or education in environmental or sustainability issues – that could have an effect on the dependent variables under study

Because of the limitations of the *one-group pre-experimental design*, as discussed in the preceding section, obtained results can only provide a measure of change and does not allow affirmative causal inferences. Considering this limitation, additional questions were included in the post-course evaluation to measure change directly. For example, in addition to the measurement of change in students' understanding of sustainability based on definitions provided before and after the course,

students were asked to provide self-reports on how they thought the module impacted on their understanding.

Questions that measured interest in S&E issues reporting and personal beliefs about sustainability were re-worded at the post-course stage to provide a direct measurement of change in the form of self-reported impact. Although modification of evaluation instrument between measurements, as Hernández (2000) notes, is a potential source of error in evaluation research, the slight modification employed in this study was advantageous in that it provided a measurement of change that was based on qualitative self-reports, as well as measurements that were quantitatively analysable. It is argued that this method addresses the problem of establishing causal relationships in the *one-group design*.

In designing the evaluation instruments, feedback was sought from the co-organisers of the programme – the late Mr. Nick Early, Professor Ian Spellerberg and Associate Professor Jim Tully. It was pre-tested once with a Ph.D candidate pursuing a similar research topic and further revised. The final evaluation instruments used in the pre-course and post-course evaluations are provided in Appendices 6 and 7.

4.2.5 Measurement methods for dependent variables and research hypotheses

(i) Measurement of understanding of sustainability

A review of earlier assessments of journalism training and education and other awareness raising interventions related to S&E issues did not find any previously established instruments for measuring changes in understanding of sustainability. Hence, for the purpose of this research, a method that uses a keyword system to quantify degree of understanding was created and is proposed as a possible measurement instrument that may be used for the purpose of evaluating understanding of sustainability. Its use and testing in the present case study and other versions of its use in the next two case studies in Chapters 5 and 6 provide a preliminary assessment of its reliability as a measurement tool. As this is a newly created method measurements of change derived from its use in this research are to be treated cautiously. For this reason, this research does not make claims of any definitive causal inferences for the observed changes in related variables.

In this case study, to measure changes to students' understanding of sustainability, a system of keywords and points was developed based on definitions and key points that the speakers provided while explaining sustainability; these included: 'social well-being'; 'equity'; 'minimising consumption', 'minimising pollution'; 'limits to population'; 'efficiency'; 'renewable resources'; 'resource conservation'; 'environmental impact'; and, 'three components of sustainability – environment, economy and society'. At the pre and post-course evaluations, students were asked to

explain their understanding of sustainability in their own words. Students' understanding was then graded based on the number of keywords and points they provided in their explanations that resembled those provided by the speakers. For example, an explanation provided by one student at the pre-course stage – “Keeping something going” – was noted to contain *no keywords* although it was the literal meaning of the word sustainability. The explanation – “I think it is a way of continuing to have scarce resources available” provided by another student at the pre-course stage was noted to contain one key point, i.e. ‘resource conservation.’ Responses were coded to a five-point *degree of understanding* scale, ranging from *no keywords*, coded 1, to *four keywords*, coded 5. The hypothesis (H₁) tested was that students would obtain higher scores in this scale, exhibiting an increased level of understanding of sustainability after exposure to the module. The use of the keyword system in this case appeared instrumental as it allowed a measurement of change that was statistically analysable.

(ii) Measurement of interest in environmental and sustainability issues reporting

The question measuring interest in environmental reporting at the pre-course stage – “Do you have a personal interest in reporting on environmental and sustainability issues when you start work?” was re-worded to measure change directly at the post course stage – “How has the module impacted on your interest in reporting on environmental and sustainability issues”. In this way, a quantitative measurement of change, and a qualitative self-reported measure of change were obtained.

Students' expression of interest were coded to a 4-point *Interest in Reporting Scale* (1–*definite no*, 2–*undecided no*, 3–*undecided yes*, 4–*definite yes*). For example, the response provided by one student at the pre-course stage – “Yes, but not particularly. I am interested in just about everything. But I recognise that the environment is probably under-reported in New Zealand” – was coded as an *undecided yes*. While another student's response – “No. Not my strongest interest. I am more interested in other stuff. [But] I am not like uninterested in it” – was coded as an *undecided no*. The hypothesis (H₂) tested was that students would exhibit an increased score in this scale after exposure to the module, indicating an increased level of interest in reporting S&E issues.

(iii) Measurements of personal beliefs about sustainability

Students were asked to provide their personal beliefs about what sustainability meant to them in the pre-course evaluation. In the post-course evaluation this question was re-worded to – “How has the module impacted on your personal beliefs about what sustainability means?” This method of questioning provided a quantitative measurement, whereby responses were coded as a dichotomous variable – ‘did’ or ‘did not’ expressed personal beliefs on the importance of sustainability, as well as qualitative self-reported impacts. The hypothesis tested was that there would be an increase in

the number of students expressing personal beliefs about the importance of sustainability after exposure to the module. As it was not feasible to quantify expressed personal beliefs in an ascending scale that can provide a measurement of depth of personal beliefs, self-reported impacts were regarded to be a more reliable measurement tool for this variable.

4.2.6 Implementation of research instruments and potential extraneous effects

Pre-course evaluations were conducted between 14 and 25 July 2005, the week before the start of the module.

As indicated in the social sciences, two threats typical of pre-experimental designs are *history* and *maturation effects* (Leary 1991; Robson 2002; Singleton *et al.* 1993). *History effects* are “extraneous events that occur outside of the research setting” that has an effect on the dependent variable (Leary 1991: 137). *Maturation effects* are “changes within the subjects themselves” such as “age-related changes” that can become confounding (*ibid*: 137). Singleton *et al.* (1993) cautioned that the chances of these threats confounding experimental results increases when the time period between pre-test and post-test is prolonged.

In this study, *maturation effects* were regarded unlikely since the time period between pre- and post-course evaluation was eight weeks including the 4-week period of treatment (duration of the module). *History effects*, however, were foreseen as a possibility. In addition to possible simultaneous extraneous events during the treatment period, the completion of the module on 16 August was followed by a two week mid-semester term break from 22 August to 2 September. This caused a delay in the post-course evaluation of some students. All post-course evaluations, however, were completed by 12 September 2005 – twenty-seven days upon completion of the module. To determine the possibility of *history effects*, the post-course evaluation asked students to identify any other factors that had contributed to their understanding of sustainability, besides the module.

4.2.7 Long-term impact assessment

A long-term impact assessment was conducted nine months following students’ completion of the programme. Jim Tully, co-ordinator of the programme, e-mailed the students on 18 July 2006 indicating that they will be contacted by the researcher for a follow-up assessment of the sustainability module. A self-administered email questionnaire (Appendix 8) was sent out to the students on 19 July 2006, and followed up with a reminder email on 2 August 2006. The questionnaire was sent to the entire class providing the opportunity for all to respond. To encourage responses, the number of questions was minimised. The questionnaire asked respondents to indicate the status of their employment; if they had done any reporting on sustainability issues; if

they had been able to apply what they learned from the module to their work; and, other factors (besides the module) that may have contributed to their abilities to report on sustainability issues. The questionnaire also asked respondents to indicate if their organisations were supportive of their attempts to report topics on sustainability.

Nine of the eleven students who participated in the earlier evaluation responded. One student who had not participated earlier also responded.

4.2.8 Assessing the integration of sustainability in the curricula of journalism courses in New Zealand institutions of higher education

To evaluate the extent to which S&E issues were integrated within the curricula of journalism courses offered at New Zealand tertiary institutions on 24 July 2006, a brief self-administered email questionnaire (Appendix 9) was sent to course co-ordinators of nine journalism schools in New Zealand (excluding University of Canterbury) that offered a *National Diploma in Journalism*; a *Graduate Diploma in Journalism*; and / or an undergraduate programme in journalism. The questionnaire asked co-ordinators to indicate if the curriculum of the programmes included a module on sustainability issues reporting and / or a module on environmental issues reporting. They were also asked to specify the title of the module and its assessment tasks. In cases where no such modules were indicated, respondents were asked if there were plans underway for the inclusion of such modules. Following a reminder e-mail on 9 August 2006, responses from three schools were received yielding a response rate of 33%.

In addition, the course content and module descriptions provided in the websites of all institutions offering journalism programmes were checked for courses on environmental or sustainability issues reporting. All websites were examined between 13 and 16 April 2007. This component of the study included one institution that offered a *Bachelor of Broadcasting Communication* programme; six institutions that offered the *National Diploma in Journalism*; and, three universities that offered the *Graduate Diploma in Journalism* programme. As topics on S&E issues may be implicit within the teaching of journalism courses, this method of assessment may not provide a definitive indication of integration of sustainability within the curricula. It does, however, provide a preliminary assessment of the degree to which environmental or sustainability issues reporting is offered as a distinct course within the journalism curricula in New Zealand institutions of higher education.

4.2.9 Statistical analysis

Considering the use of ordinal scales of measurements and the small sample size of journalism students, all concerning statistical analyses were performed using non-parametric statistics. As the

number of journalism schools that responded to this study was too small, findings were not statistically analysed.

4.3 Results and Discussion

Impacts of the sustainability module are discussed in sections 4.3.1 – 4.3.9. Assessment of the integration of sustainability in the curricula of journalism courses in New Zealand universities and colleges is provided in Section 4.3.10.

4.3.1 Potentially confounding variables

(i) Prior work experience with a media organisation

As illustrated in Figure 4-1 most students indicated some media-related experience prior to their enrolment as students.



Figure 4-1 Students prior media related experiences

(ii) Previous experience of having work published or broadcasted

Five (45%) had previously worked for a mass media organisation before their enrolment in the programme. Eight (73%) had produced materials that had either been published or broadcasted in a mass medium.

(iii) Prior experience in writing environmental / sustainability stories

Six (55%) indicated that they had written stories on environmental or sustainability issues prior to the sustainability module (Figure 4-2). Of the six, four said that they recognised the story to be a sustainability issue and that this recognition did effect how they approached the story.

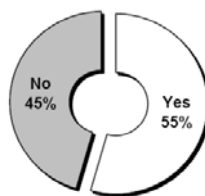


Figure 4-2 Previous experience in writing environmental / sustainability stories

(iv) Prior training or education in environmental / sustainability issues

As Figure 4-3 shows, a majority of eight (73%) indicated that they had not previously undergone any training or education in environmental or sustainability issues. One student specified having undergone an undergraduate course on “Environmental Ethics.” Another indicated related high school education, while a third student indicated having attended a seminar on clean heat.

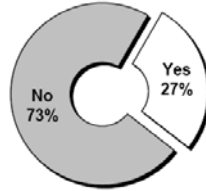


Figure 4-3 Prior training or education in environmental or sustainability issues

4.3.2 Exposure to the treatment (module on sustainability)

In the post-course evaluation, it was confirmed that all students who participated in the research had attended all four sessions of the module. The problem of ‘noncompliance’ or ‘nonadherence’ to assigned treatment in experimental research, which weakens outcome interpretations, as noted by Gitelman (2001), was thus not a concern in this study.

4.3.3 Impact on understanding of sustainability

The number of keywords students used in expressing their understanding of sustainability at the pre- and post-course stages is provided in Table 5-1.

Table 4-1 Pre-to-post changes in understanding of sustainability

Number of keywords used	Number of Students	
	Pre-Course	Post-Course
No keywords	3	0
One keyword	5	3
Two keywords	3	4
Three keywords	0	1
Four keywords	0	3

As detailed in Table 5-2, when pre-course understanding of sustainability of groups of students with and without the four potentially confounding factors were compared using *Mann-Whitney U Tests*, no significant differences were found. This established a degree of equivalency between students, at the pre-course stage.

Table 4-2 Comparison of the level of understanding of sustainability between groups of students with and without potentially confounding factors at the pre-course stage

Potentially confounding factors	Mann-Whitney U Test results
Prior work experience with a media organisation	U=11.000, N1=5, N2=6, p=0.537
Previous experience of having work published or broadcasted	U=12.000, N1=8, N2=3, p=1.000
Prior experience in writing environmental / sustainability stories	U=7.000, N1=6, N2=5, p=0.177
Prior training or education in environmental / sustainability issues	U=12.000, N1=3, N2=8, p=1.000

At the pre-course evaluation although most students mentioned the continued availability of ‘resources’ and some mentioned ‘environmental care’ when expressing their understanding of sustainability, other key terms and points were not mentioned. Factors that contributed to their pre-existing understanding and beliefs about sustainability are presented in Figure 4-4. A majority of nine (82%) students attributed their pre-existing understanding to information gained from the mass media, while six (55%) to formal education.

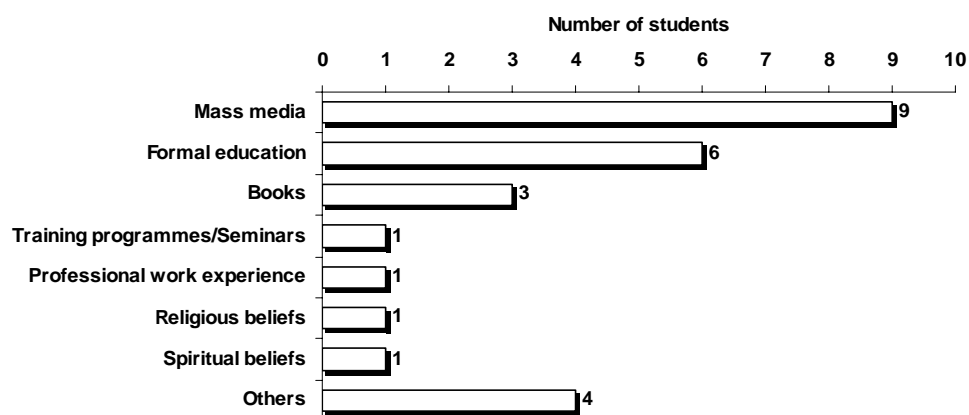


Figure 4-4 Factors indicated to have contributed to pre-existing understanding and beliefs about sustainability

As the results provided in Table 5-1 above show, students were able to provide explanations with more keywords at the post-course stage. A *Wilcoxon Signed-Rank test* showed a statistically significant increase ($Z=2.132$, $N\text{-Ties}=7$, Exact $p=0.03$, two-tailed) in the pre-to-post scores in the *degree of understanding* scale. H_1 was therefore supported. The test showed 6 positive ranks out of 11, indicating that 55% of the students exhibited an increase in understanding of sustainability. However, as indicated in the methods section of this chapter (see Section 4.2.1), considering the small sample size findings are to be treated as a preliminary indication of impacts that may result from such a module. Furthermore, as explained in Section 4.2.5, the keyword measurement system used to measure changes to this dependent variable is one that has not been previously used or tested, further stressing the provisional nature of this finding.

To determine *history effects*, i.e. factors other than the module that may have contributed to student’s understanding of sustainability, the post-course evaluation asked students to indicate if there were any such factors. Two confirmed that there were no other contributing factors; three

others indicated that the only other factors were the handouts provided and websites suggested by the speakers. Changes in understanding of sustainability for these five students (45%) may hence be largely attributed to the module. Six others (55%), however, indicated a variety of other contributing factors (Figure 4-5), suggesting a certain degree of *history effects*.

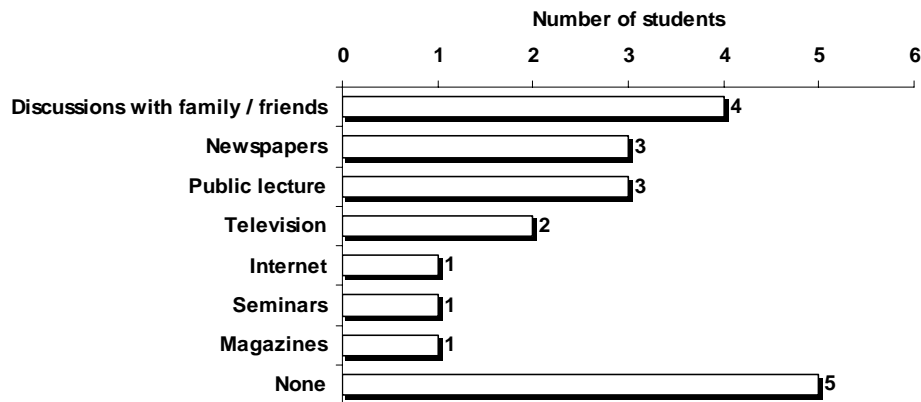


Figure 4-5 Factors other than the module indicated to have contributed to understanding of sustainability at the post-course stage

The post-course evaluation also asked students to provide self-reports on how the module impacted on their understanding of sustainability.

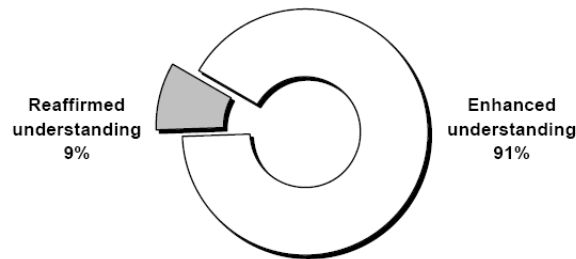


Figure 4-6 Self-reported impact: Understanding of sustainability

As Figure 4-6 shows, a majority of ten students (91%) said that the module enhanced their understanding and provided knowledge on areas that they had not known earlier. The following quotes illustrate the positive self-reported impacts on understanding:

It has allowed me to learn a vast amount about sustainability in New Zealand, and made me realise that I really didn't know anything about the issues.

I didn't know anything about sustainability before the module, so I found everything very interesting and worthwhile.

It has made me more aware of the broad reach of sustainability into many aspects of our lives.

It has enhanced my understanding of what it means to be sustainable and ways in which sustainability can be achieved.

Really well, actually. Because I didn't quite understand the business models. The business models made it more clearer. Before I knew that sustainability was about keeping things going. But I didn't understand how they were working within the limits of the environment. I didn't

think about those. I was just thinking about doing things environmentally friendly and not the whole actual system.

I suppose it has had an impact. I didn't really know what it was before but now I do. We were made more aware about...all the eco-problems that were going on in the world. A lot of it is, I think, that they explained it to you without hanging over your head like it was a greenie issue. That it had actually got some mainstream voice...so that was pretty good.

One student (9%) said the module only reaffirmed her existing understanding. She said: "Most of it was a reconfirmation for me. Some of the stuff that I knew gave me [a] more specific way of expressing it. I think it confirmed what I had thought myself and how the media works in sustainability."

At the post-course evaluation, students were also asked to identify the most important messages they gained from the module. Results are presented in Figure 4-7.

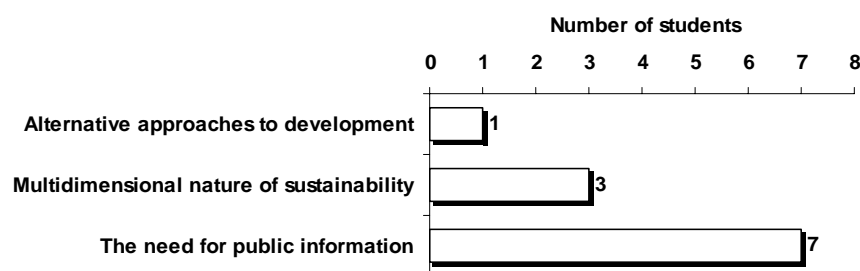


Figure 4-7 Self-reported impact: The most important message gained from the module

For one student (9%) in this study, it was the awareness of alternative approaches to development. She said: "There are alternative ways of doing things that can be economically positive as well as better for the environment."

The responses provided by three students (27%) were indicative that the most important message gained was an understanding of the multidimensional nature of sustainability:

Probably that it includes everything. You can't separate, you can't say it's just about the environment or it's just about the economy, it is everything intertwined. That it is important to think about these kinds of things on a bigger scale. It's not going to be there forever.

That we must first focus on the environment for social and economic factors to prosper.

One of the best things I heard is about how to cover sustainability – whether to have a specific section on the environment, or that you can cover it in any issue. I thought that it was a good thing, for people to think of. I thought this was good for people to know, since almost everything can be an environmental issue. I thought this was quite interesting.

As the following quotes illustrate, for a majority of seven students (64%), the most important message gained was the urgent necessity for public information:

The fact that people need to be educated on what the impact of human society or human endeavour is having on the environment, and that the environment can't sustain that forever.

That New Zealand as a society has a pretty blasé attitude towards the environment and that it definitely needs to be changed.

The realisation that New Zealand is not as clean and green as we would like to think it is. It has provided me with a wider understanding and that we need to incorporate the environment whenever we can while reporting, and how important this is.

That there needs to be change; that people need to start thinking differently about sustainability. A lot of people still think too narrow-mindedly about it – that by giving some money to the environment or by using recycled paper, it is sustainability, when it is not.

That it's a message that needs to be heard by more people.

As journalists, every time we write a story, we should ask ourselves whether there is a sustainability issue involved. Until sustainability issues become mainstream news, i.e. does not feature only in the environmental section of the paper, for example, it will be very hard for any of the messages that we are receiving from scientists, environmentalists, etc. to have any impact and thus for any change to occur.

I think if you want to make it more visible for the mainstream society it has to go into general news more. And that is not being done. It was mentioned that [only] a tiny percentage of news reportage in New Zealand or the world is environmental issues compared to others.

This finding was comparable with Freedman's (2004) assessment of an "Environmental and Science Journalism" course introduced for the first time in a journalism school in Uzbekistan. Freedman found that as a result of undergoing the course, students became more aware of "the extent of ecological problems in Uzbekistan" and "the range of environmental stories that go unreported in their country" (*ibid*: 159-160). The course, hence exposed students "to the important roles that envirojournalism can play in Uzbekistan's future" (*ibid*: 159). In a similar way, several students in this study, as the quotes above suggest, indicated an awareness of the role they could play as journalists in enhancing public awareness.

At the post-course evaluation, all students indicated intents to pursue their career in mass communication; many specified journalism and the various fields that they would like to specialise in. To further test their understanding, in the post-course evaluation, students were asked to indicate how they would apply what they learned from the module to their area of interest in reporting. Results are provided in Figure 4-8.

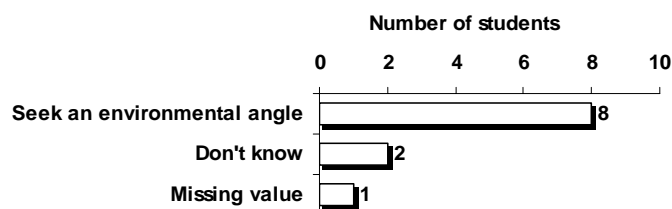


Figure 4-8 Application of what was learned to future work

Two (18%) said that they were not sure how they could do this. The first said "I don't really know. I don't know how sports would relate." The second said:

I don't know really. I can't think how I can apply it to [politics or sports]. With politics there is the issue of being fair and balanced and not biased and that sort of thing, but, anything new might not have come out of the sustainability module. Just from what I have learned from the module, I don't see how I could [provide] more in terms of reporting on those two.

Eight (73%) indicated that they would look for an environmental angle or viewpoint of a story, as the following quotes convey:

[I] would apply it to news and current affairs – to consider what the impact on environment would be for given circumstances – as a viewpoint that should be considered and included in the story.

By having a greater understanding of sustainability and the environment I will be able to look certain stories from different angles, and assess how the news may [include] effects [on] the environment.

I will be more inclined to be looking at things in the bigger picture. When you look at a story that involves one person advocating one thing, powerfully, then I would be looking at, applying a wider view to do that. For example, if this development is great, and it is all good to say all that is good about it, but what is the wider impact on the environment, and social impact and so forth. So it has helped me look at things in terms of the big picture.

Three others (quoted below) added that an environmental angle could be sought in any story that is covered:

In everything that I write, produce, etc. I would look at whether a sustainability issue was involved (including whether a certain group, environment, resource was affected, etc.) to incorporate it into my work, i.e. it would be one of the many questions that I would ask each time I wrote an article.

I guess I am more aware of the issues and I would look for the environmental angle in any issue that I am covering.

...anything can be an environmental issues. You can look at different things from different perspectives. For example environmental issues from an ethnic perspective.

4.3.4 Impact on interest in reporting environmental and sustainability issues

Establishing a degree of equivalency between students at the pre-course stage, *Mann-Whitney U Tests* (presented in Table 4-3) showed that there were no significant differences between groups of students in their level of interest in reporting S&E issues when the four potentially confounding variables identified earlier were taken into account.

Table 4-3 Comparison of the level of interest in reporting S&E issues between groups of students with and without potentially confounding factors at the pre-course stage

Potentially Confounding Factors	Mann-Whitney U Test Results
Pre-existing work experience with a media organisation	U=11.000, N1=5, N2=6, p=0.537
Previous experience of having work published or broadcasted	U=8.500, N1=8, N2=3, p=0.497
Previous experience in writing environmental / sustainability stories	U=10.000, N1=6, N2=5, p=0.429
Prior training or education in environmental or sustainability issues	U=11.000, N1=3, N2=8, p=0.921

As results presented in Table 4-4 indicate, there was an increase in number of students with higher scores in the *Interest in Reporting Scale* at the post-course stage.

Table 4-4 Pre to post changes in scores for the *Interest in Reporting Scale*

Interest in Reporting Scale	Number of Students	
	Pre-Course	Post-Course
Point 1- Definite no	1	1
Point 2 - Undecided no	4	0
Point 3 - Undecided yes	3	6
Point 4 - Definite yes	3	4

H₂ was not supported as a *Wilcoxon Signed-Ranks test* showed that the difference between pre- and post-course scores was not statistically significant (Z=1.318, N-Ties=7, Exact p=0.187, two-tailed). Nevertheless, the test showed 6 positive ranks out of 11, indicating that 55% of the students exhibited an increase in score in this scale.

Self-reported impacts, illustrated in Figure 4-9, on the other hand, showed that a majority of nine students (82 %) believed that the module did have an impact on their interest, at varying degrees.

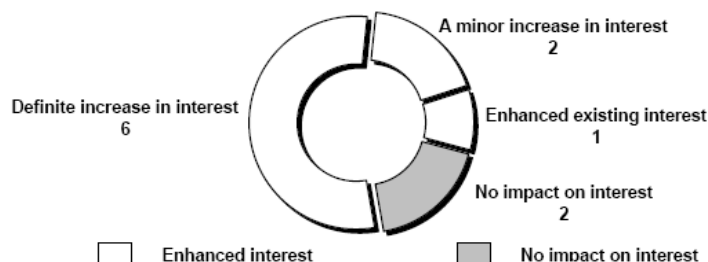


Figure 4-9 Self-reported Impact: Interest in S&E Issues Reporting

A qualitative examination of answers provided by students revealed that six students (55%) who indicated a lack of interest at the pre-course stage experienced an increase in interest as a result of exposure to the module. For example, at the pre-course interview one said that she did not know much about sustainability and hence did not have an interest in reporting about it. She exhibited a change at the post-course interview; she said: “It has made me more aware, and I have more confidence to report on environmental issues. Before, I wasn’t confident. I would definitely be interested to report on environmental issues.” Similarly, another explained that his earlier lack of interest in environmental reporting was because he did not have much knowledge about it. Another student, who earlier indicated that it was “not a primary interest,” provided an elaborate perspective at the post-course interview, exhibiting an enhanced level of interest:

It has enhanced my understanding about sustainability. It also made me realise that if change is going to occur, it is really up to the media to help put the message out there. It seems that the message does not have enough mainstream outlets i.e. it is restricted to environmental [and] science publications, which do not reach everyone. Sustainability issues need to be incorporated into every day life for only then will people wake up to what we’re doing to our

environment and what we need to do or not do to preserve it. We have the knowledge of what needs to be done; now it's a matter of getting the message through in a way that has impact.

For two other students (18%), on the other hand, although the module motivated an interest in the area of environmental reporting, the impact was not substantial, as the response of first student illustrates: "It has widened my understanding and triggered an interest but it is not as if I am all geared up to go out and become an environmental reporter." The other expressed:

It has certainly impacted on my interest in terms of bearing it in mind. But it hasn't made me want to become a campaigner. But it certainly made me realise that it is okay to have that awareness and it is possible to incorporate that in the mainstream work that you do. I won't say I won't cover an environmental story just because I was not an environmental reporter. We already do some stuff that goes into that zone. But it means I am better informed, when I report something like that.

In the case of one student (9%) the module strengthened a pre-existing interest in environmental reporting. At the post-course interview she said "I think it has reinforced what I had thought already. I was keen on it before, but it has made me more [determined] about it. It made me commit to myself that this will be something that I really pursue."

Two students (18%) said that the module did not have an impact on their interest to report on the issues. One explained:

I have always been passionate about the environment and the fact that a large portion of it is in desperate need of looking after. Due to this I don't feel I could report on the matters objectively so it is not an area I wish to work in but I will continue to follow certain issues and be involved in certain organisations.

Although most students expressed a degree of interest in reporting S&E issues, when asked what journalism area they would like to specialise in at the post-course stage, only one student indicated environmental reporting to be of the areas that she would like to specialise in. Others indicated areas such as sports, politics, arts, entertainment, and business, while a few said that they did not want to specialise in any particular area or that they were undecided. One student expressed that although the module increased her interest in environmental reporting, she felt that the career prospects for an environmental reporter were limited. She said:

There are no avenues at the moment, if you want to get into it as a career, there is not that many. It seems like people ignore it a lot. If you wanted to specialise in environmental reporting there is a narrow amount of place to go. Like you probably couldn't go to a newspaper and make it your niche.

4.3.5 Impact on personal beliefs about sustainability

At the pre-course stage, while four students said that they did not have any personal beliefs about sustainability, seven believed in its importance and were supportive of it. As illustrated in Figure 4-10, five believed it to be an important concept that was worthy of support.

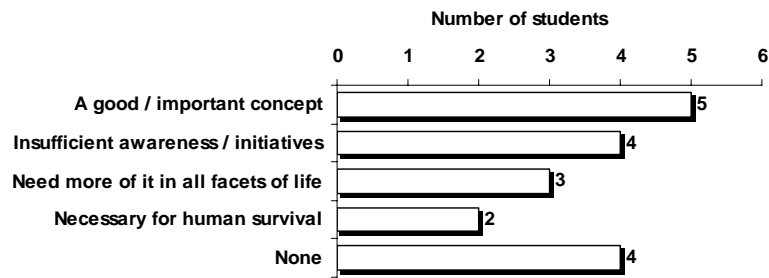


Figure 4-10 Pre-existing personal beliefs about sustainability expressed at the pre-course stage

Four added that there was a lack of sustainability initiatives in New Zealand and a lack of awareness of what sustainability means. Three emphasised the need for sustainability in all human actions. Two believed sustainability to be necessary for human survival and for conservation of resources for future generations.

The number of students who indicated personal beliefs about sustainability at the pre- and post-course stages is provided in Table 5-5.

Table 4-5 Pre-to-post changes in the number of students expressing personal beliefs about the importance of sustainability

Personal beliefs about the importance of sustainability issues	Number of Students	
	Pre-Course	Post-Course
Expressed personal beliefs	7	11
Did not express personal beliefs	4	0

A *McNemar's Test* using binomial distribution indicated that there were no significant differences between pre-course and post-course indication of personal beliefs about sustainability (N=11, Exact $p=0.125$, 2-tailed); hence, H_3 was not supported.

As illustrated in Figure 4-11, self-reported impacts provided by four students (36%) at the post-course stage were indicative that their personal beliefs were not impacted by the module. Seven others (64%), on the other hand, said that their understanding and awareness of the issues did improve after the module. However, a qualitative examination of their responses revealed that impacts on their personal beliefs were indistinct.

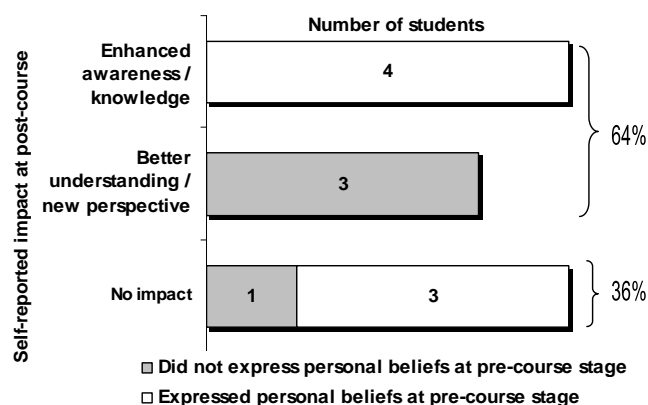


Figure 4-11 Self-reported impact: Personal beliefs about sustainability

Nevertheless, in the case of two students (quoted below) the module appeared to have had an impact on their personal beliefs about the severity of environmental problems:

I now understand that New Zealand needs to place greater emphasis on the environment and not just on economic and social matters. Jeanette’s session where she highlighted the fact that many of New Zealand’s rivers were not safe to swim in – this affected me personally as I do not want my future children to worry about that sort of thing.

I guess the realisation that NZ is not clean and green. For example, the fact that 95% of rivers are not clean enough to swim in, that Jeanette Fitzsimons mentioned – this really impacted me, because I like having the rivers there for me to swim in.

4.3.6 Impact on students as citizens

At the post-course evaluation students were asked to indicate the biggest or the most important impact that the module had on them as citizens.

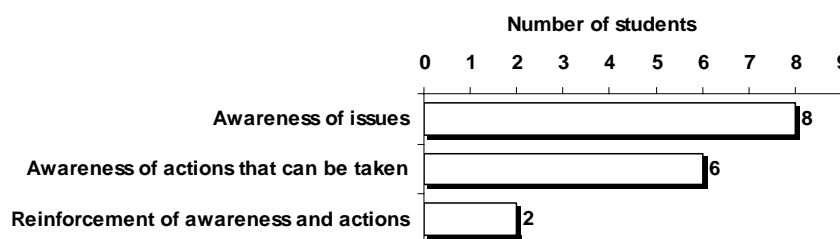


Figure 4-12 Self-reported Impact: Impact of module on students as citizens

As results presented in Figure 4-12 illustrate, a majority of eight (73%) said they experienced an increase in awareness about environmental issues. Although none provided affirmative impacts on behaviour as citizens, six (55%) said that the module had either made them think about their personal behaviour and / or actions that can be taken. For example, one said: “It has definitely made me aware of some environmental issues and sustainability issues, but I am not doing anything about it. I do think about it; that I should walk here instead of driving. But then I am in a hurry.” Another said: “I guess it made you start to think a little bit more about things. I have started riding

my bike more, because of the price of fuel and thinking about those sorts of things.” She added that hearing about the issues made her want to strive “to be a better person and pay more attention to even little things like recycling” and riding the bike. Another student said: “It made me think about waste. I think waste struck me, because it is something people can actually do and make a difference. Made me think about where our waste goes, and what I can do in terms of recycling.” Another said that she would consider issues brought up in the module such as petrol taxes, when deciding on which party to vote for. She explained, “I think we need to start taking individual responsibility and the only way to make people do that is through the wallet”. However, she said “Sustainability concerns will not be the deciding factor [when I vote], but the module has made me consider them in more depth than I would have done otherwise.”

Two students (18%) indicated that the module reinforced their concerns about the environment. The first said: “Environmental issues have always had an impact on me, so the module basically confirmed my interest and cemented my own opinions.” The second said that she was already conscious about her consumption and issues such as house insulation and water use. Nonetheless, she said: “[The module]...just reinforced things for me, that there are issues that we are facing and it is not going away.”

4.3.7 Student’s assessment of the module

In the post-course evaluation, students were asked to indicate how they rated the module in terms of how it equipped them with sufficient knowledge to report on S&E issues.

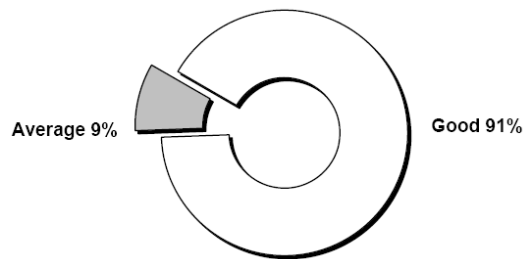


Figure 4-13 Students assessment of the module

As Figure 4-13 shows, one (9%) rated the module to be average in terms of the information provided. She explained that four sessions were insufficient to cover a very broad topic. She added that although the module was a good introduction, journalists need to always acquire wider knowledge and investigate further. A majority of ten (91%), on the other hand, rated the module to be generally good in terms of the information provided. The following quotes demonstrate this positive view:

I think it was really good. Had we not had it, and we had to at some stage in our career become faced with having to report issues like that, we probably would have perpetuated the cycle that has been going on and added to that more, without the awareness that there is a third way. Had

we not done it, I think I would have approached it the same old way, instead of having a new perspective on it. Now I can approach it from a few different angles.

All sessions were good and very informative. John Peet's session was the most thorough.

It's opened my eyes and offered suggestions.

It equipped us with awareness about the issues and the necessity of incorporating them, if possible, in to all the work that we as journalists produce. As I said above, the messages and information about what we need to do needs to be put out there through mainstream media so that they reach everyone, not just a specialised audience or those who read the environmental section of the newspaper.

It gave me a background about a lot of environmental issues, which was good.

I think that most of the speakers informed us very well about the issues New Zealand is facing in terms of its environment. If any environmental issues arose I think I would have a pretty good base of information from which to start the story.

Although students regarded the information provided to be generally good, some pointed out the drawbacks they observed during the module sessions. These are discussed in section 4.3.10 of this Chapter.

4.3.8 Long-term impact assessment

In the long-term impact assessment it was found that nine of the ten who responded were employed at various media organisations as specified in Figure 4-14 either as journalists or reporters and in two cases as sub-editors.

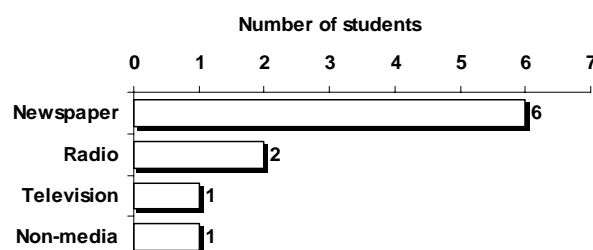


Figure 4-14 Employment status of students nine months after completion of the diploma program

Three indicated that they were general reporters; four specified that the rounds they included, sports, crime, police, welfare, youth issues, local law issues, and local government. None specified environment as a round covered.

Eight indicated that they had not reported on sustainability while in employment. Two indicated that they had, of whom one said that she had covered, "water issues in Canterbury." She said that she was able to apply what she learned from the sustainability module to her work. In explaining how she did this, she specified the following points:

[1] Applied understanding of growing issues with world/national oil and water resources, to stories. [2] Read financial reports with triple bottom line. [3] Gauged companies' assessment of own environmental impact in financial reports.

In detailing what she had covered, the second student said:

I did a series of articles from December 05 to February 06 covering the council's decision on a new recycling scheme for the city. I also covered several resource consent issues; for example, regarding potential for noise pollution (Aeolian Harp in the Port Hills) and several articles on traffic congestion problems [and] transport solutions for Christchurch. Another useful article might be a feature I did in November on the potential effects of an energy crisis.

She, however, explained that she was not able to apply the knowledge she gained from the module to her reports:

The issues covered in the course were based more upon broader environmental issues (energy, river pollution) than infrastructural issues – which lessening these impacts on the environment is the concern of the council. I felt the sustainability module was more a series of special interest lectures, rather than how it could specifically be applied to journalism practice.

Both confirmed that their organisations were supportive of their attempts to report on topics related to sustainability. One, however, pointed out that issues were covered

only if they affected local people – [as this was the] the focus of the 'Readers First' programme employed by the paper. Consumer related stories – fuel prices, public transport, recycling prices – were particularly encouraged. The story had to emphasise how it would affect a local person.

Respondents, who had not covered any sustainability related topics, when asked to explain why they were not able to do so, provided the following answers:

Crime reporting doesn't really pertain to sustainability. I have not come across any issues in my round that require me to use the things I learnt in last years module.

Sustainability doesn't really relate to sports. [What I learned in the module]...hasn't been needed in sports.

Not covered by my rounds. No opportunity as yet [to apply what I learned in the module] as sustainability does not feature in my rounds at the paper.

Because it has not been relevant to any stories I have written.

To be perfectly honest, none of the stories I have covered so far have had anything to do with sustainability. If I was given a story on some form of sustainability, I would definitely go back to the module on sustainability from last year. I would also check with colleagues to see how they had covered their stories.

The two sub-editors explained:

As a sub-editor, I only correct stories, not write them. Potentially [what I learned in the module] may make me try to retain references to sustainability and such issues within stories that I sub-edit, so there is in respect some flow-on from the module, though I cannot think of concrete examples where this has applied.

I am not a reporter. I do not produce stories. The core of my work is layout and design of news pages.

The one student who was not employed at a media organisation said: “Has not been a requirement in my work to date. Outside of work I have not sought opportunities to cover stories on sustainability issues.”

Although they had not covered sustainability-related topics, four believed that their organisations would have been supportive if they had attempted to report on the topic:

They have not been ‘supportive’ as such, but they have also not been unsupportive either as far as I can observe from my position.

They would be supportive if the issue was relevant to our readership and timely. However, as my area of reporting does not really relate to sustainability much I have not come across any stories that apply.

I have no doubts they would be. [Name of organisation omitted] has a comprehensive support and contact system which makes reporting that little bit easier!

They haven’t prevented me reporting on topics related to sustainability.

4.3.9 Integration of sustainability within the journalism curricula in New Zealand institutions of higher education

The course contents of the *Bachelor of Broadcasting Communications* programme offered by the Christchurch Polytechnic Institute of Technology as specified in its website⁴⁷ included Level 5 and Level 6 courses in: Broadcast Journalism; Television Production; Digital Film and Television Production; Radio Production and Performance; Broadcasting Policy and Practice; internships and a major project. The co-ordinator of the programme indicated that a specific module on sustainability was not part of the programme. Nevertheless, she said that environmental reporting is included in a one-week session on “Local Body issues reporting” and that “environmental educators [were] invited to speak to students.” She said that students are required “to write two local body issues stories, which may or not may not cover” environmental issues.

The course contents of *National Diploma in Journalism* programmes based on information provided on the websites⁴⁸ of the respective institutions are provided in Tables 4-6.

⁴⁷ Christchurch Polytechnic Institute of Technology, www.cpit.ac.nz.

⁴⁸ Aoraki Polytechnic, www.aoraki.ac.nz; Southern Institute of Technology, www.sit.ac.nz; Waiariki Institute of Technology, www.waiariki.ac.nz; Waikato Institute of Technology, www.wintec.ac.nz; Western Institute of Technology, www.witt.ac.nz; Whitireia Community Polytechnic, www.whitireia.ac.nz.

Table 4-6 Course contents of *National Diploma in Journalism* programmes in six New Zealand institutions of higher education

Institutions	Local Government	Treaty of Waitangi Issues	Law / Court/ Police	Media Ethics	Media Law	Cultural Viewpoints / Issues	News Writing	News Gathering	Feature Writing	Other Skills
Aoraki Polytechnic	✓	✓	✓	✓	✓	✓	✓		✓	✓
Southern Institute of Technology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wairariki Institute of Technology	✓	✓	✓	✓		✓	✓	✓		✓
Waikato Institute of Technology		✓	✓				✓	✓	✓	✓
Western Institute of Technology	✓	✓	✓	✓	✓	✓			✓	✓
Whitireia Community Polytechnic	✓	✓	✓	✓	✓	✓	✓		✓	✓

While the course contents of *National Diploma in Journalism* programmes reflected the unit standards of the *New Zealand Journalists Training Organisation*⁴⁹, environmental and/or sustainability issues reporting were not offered as a distinct course within the programmes. However, inclusion of S&E issues may be implicit within the teaching of journalism courses. As one course co-ordinator indicated when asked if there were plans to include environmental or sustainability issues reporting within the curriculum:

There is no formal class module planned, as we have unit standards we teach to. However, it is an area that students pick as a round and as such stories are done on sustainability [and environmental] issues. I talk about it as a general round when we are talking about rounds though.

Table 4-7 lists the course contents of the *Graduate Diploma in Journalism* programmes specified in the websites⁵⁰ of three New Zealand universities.

⁴⁹ New Zealand Journalists Training Organisation sets the standards for journalism qualifications and monitors journalism training in ten New Zealand tertiary institutions. The organisation also publishes journalism textbooks and organises training seminars for news professionals. For further details see: www.journalismtraining.co.nz.

⁵⁰ Auckland University of Technology, www.aut.ac.nz; University of Canterbury, www.canterbury.ac.nz; Massey University, www.massey.ac.nz.

Table 4-7 Course contents of *Graduate Diploma in Journalism* programmes in three New Zealand Universities

Institutions	Journalism Theory & Practice / Introduction	Specialist Writing	TV / Radio / Magazine / New media journalism	Photojournalism	Media Law / Ethics	Investigative Reporting	Public Affairs	Public Relations	Global Journalism	Journalism History	Environment / Sustainability	News Reporting	Other Journalism Skills
Auckland University of Technology	✓	✓	✓	✓			✓					✓	✓
University of Canterbury	✓	✓	✓	✓	✓	✓					✓	✓	✓
Massey University	✓				✓	✓		✓	✓	✓	✓		✓

Notwithstanding the possibility that environmental or sustainability aspects may appear as topics of discussion within the various courses offered, only two of the institutions under study appeared to have distinct courses or modules that included the topic environment or sustainability. Massey University offered a 15-credit course on “Environment and Science Journalism” which was described in its website as: “A study of the theory and practice of environment and science journalism. The course encompasses an analysis of contemporary issues and develops related research and writing skills.” The course co-ordinator said that the course “encourages students to look at issues such as sustainability” although the programme does not included a “module directly on sustainability.” He added: “I have plans to refer more directly to the issue [of sustainability] in a revised study guide for 2007.” The “Environment and Science Journalism” course, he says, includes “12 hours of lectures, plus a further 12 hours of tutorials and training” and students are required to submit “three essay assignments.” In further email correspondence with the researcher, he indicated that the course was introduced in 2005. He explained that “it was not a compulsory paper,” and that at present it was “being offered every alternate year.” In addition to being “offered as part of a *Graduate Diploma in Journalism Studies*” he said that it was also offered “as part of a *Bachelor of Communications* degree” as a “Stage III paper.” Although no impact assessment of the programme has been conducted he said the “students seemed to enjoy the course very much.”

When asked what prompted the initiation of the module, he explained:

It was introduced at my urging because I believed there was a real and growing need. Papers don’t generally think of these issues as “sexy”, but are increasingly being forced to take them seriously as environmental issues loom. I’m a former science and environment reporter, so have also developed a personal passion for the subject.

This finding reinforces Griffin and Schoenfeld’s (1982) observation that faculty members with an interest in teaching environmental issues can have an affect on the frequency of environmental reporting courses and inclusion of environmental aspects in the curriculum of journalism courses. They repeatedly observed that the inclusion of environmental aspects within the curricula of

journalism programmes and related activities was not dependent on student enrolment numbers which they say is “potentially an important indicator that environmental programs may still grow in an era of tight budgets, given dedicated faculty” (*ibid*: 9). However, in this study, the above co-ordinator expressed that developing the module was no easy task; he said: “The problem with suggesting a new paper, of course, was that all the work fell on me! I had to write the paper from scratch, which turned out to be a mammoth effort.”

The University of Canterbury initiated the module on sustainability in the academic year 2005. The Auckland Institute of Technology offered “Specialist Writing” as a compulsory course within its *Graduate Diploma in Journalism* programme. According to the course outline provided in its website: “Students explore specific news rounds in depth and produce complex stories with analytical content. Students write stories from four out of six areas covered during lectures and tutorials, e.g. sport, business, science, regional affairs.” As the environment is sometimes associated with the science round, the possibility of its inclusion in this course was noted.

Due to the high rate of non-response from course co-ordinators, this component of the research is to be treated as a preliminary assessment.

4.3.10 Aspects to consider in designing a journalism module on sustainability

Designing a journalism module on sustainability is likely to be laden with challenges and difficulties. While Patterson (1979: 2) described in the 1970s that change in the science and environmental fields posed a “challenge to journalism educators to develop innovative [programmes] in response to” those changes, it may be argued that journalism educators today are faced with yet another challenge to develop programmes on covering the complex topic of sustainability.

In her evaluation of environmental journalism education in US universities in the early 1990s, Friedman (1994) reported several problems identified by environmental journalism educators. Many identified time constraint to be a major problem. Others found the available textbooks to be either too constrained or too general. Administrative problems that affected environmental journalism programmes were mainly due to “departmental budgets, restricted university funding and a shortage of faculty members which did not allow these courses to be offered as frequently as they should be” (*ibid*: 11). In some cases, it was essential that enrolment numbers are high in order to justify the holding of a course (*ibid.*).

In pointing out the particular difficulty for those teaching science and environmental writing, Tichenor (1979: 5) noted that these teachers “may find their students facing a crisis of career which, in no small measure, arises from the uncertainties in science itself and its application to

social problems.” While the element of uncertainty in science, as Tichenor correctly notes, is a longstanding inherent aspect of the scientific process, sustainability brings with it additional dimensions of complexity. From a broader perspective, Pearson *et al.* (2005) observe that one of the difficulties universities face in incorporating sustainability into education is the ‘transdisciplinary approach’ that the concept of sustainability requires. In addition, Down (2006), Moore (2005), Sherren (2006) and Thomas (2004) have observed various challenges and problems that impede the inclusion of sustainability within the curricula in institutions of higher education. Journalism schools are likely to face similar challenges in bringing about changes within their curricula. While the provision of environmental education has been a challenge for institutions of higher education in general, as Orr (1996) pointed out, Casey (1998) observed the lack of educational models for teaching environmental journalism and communication in the United States, presenting a challenge within these particular fields.

Grossman and Filemyr (1996) observed that very few references and guides exist for journalism educators to use as a base. In *Greening the College Curriculum*, Grossman and Filemyr detailed a course plan for an environmental journalism course which includes “topics and reading assignments,” “journalistic writing assignments” and a “unit on environmental racism” (*ibid*: 179-180). In describing the course, they noted:

The emphasis throughout is on developing a cross-cultural and international perspective from which to understand the pressing environmental issues facing today. Students will be actively involved in reading, discussion, research, and writing on current environmental issues, as well as learning about the recent development of environmental journalism worldwide as a speciali[s]ation within the field of journalism (*ibid*: 180).

Freedman (2004) described the designing of a pilot course in environmental and science journalism and provided details of its course contents and assignments. These examples may serve as a guide for designing similar courses in other journalism schools.

In rating the module’s impact and effectiveness, some students in this study pointed out its drawbacks and limitations. In addition, at the end of the post-course evaluation, students were asked to indicate any suggestions they may have for improvements to the module. These suggestions and others provided in the literature, as detailed below, could be taken as important feedback for the development of future modules on sustainability within the journalism curricula.

(i) The need for practical aspects and real world experience

As noted earlier, sustainability brings with it additional dimensions of complexity, which may be addressed to some degree through ‘practical work’ and ‘real world experience’ in journalism education. Students in this study have suggested that a module on sustainability is likely to be more beneficial if it includes a session on the practical aspects of reporting. Five (quoted below)

indicated that although the module was informative in providing the current situation of S&E issues in New Zealand, it lacked in terms of the practical aspects of reporting such issues:

There was a lot of information given but we were not clear as to exactly what we can do as journalists...I think it would be good if they can point out to us what they want us to do, with some examples.

Most of it was on explaining sustainability rather than...how we journalists should approach environmental reporting. [However]...you had to understand these issues before you can report on it. So that was pretty necessary.

Maybe if the speakers told us what they wanted to see, in the media. Bring a more media based content. And what we as journalists can do. Do they want more stories about it in the papers? Do they want people knowing about it? No one really said I want to see more in newspapers or more on TV. And just how to go about it? Where we could consider the environment in our stories?

Maybe it could have been a bit more practical. Like what would you do to cover this story, who would you go to for information, what would be the environmental angle, why would some people not want you to publish that view etc.? This would get us thinking and stop us from getting bored.

I think it would have been more helpful if we got a bit more sense as to how we can work as journalists, in relation to this. We'd ask the question – How do you think we should report it? There were a lot of suggestions, but some of the speakers were coming from a different perspective such as Jeannette Fitzsimons, a Green's party leader, and not necessarily from the perspective of what journalists need to do to cover the environment. It was more like – these are the issues that we are facing, and go out and be aware of this...It gave you ideas, but I would like to see someone who has done it in practise to tell us about what they have done.

In addition, four suggested that it would be good if the module included a session by either an environmental journalist or someone who would be able to provide information about environmental reporting from a journalism perspective:

You could include a session by an environmental reporter who might be able to give us some real examples on how to do this sort of reporting. I don't know how easy or difficult it would be for you to find one, but this would be good for the module.

...a journalist who works in the area should provide a session.

A talk from someone with a news grounding, who has experience in environmental reporting. More useful to us as journalism students – they know what its like to try and report the stuff.

It would have been good to have someone who works as an environmental journalist or someone from a journalism perspective talking about how to cover environmental issues. Would be good to hear from them about what they are doing and how they are doing it. It would make it seem to me, less ethereal, about what happens when you put it in practice.

Similarly, Freedman (2004: 160) reported that journalism students under his study suggested the inclusion of practical aspects in the “environmental and science journalism” course in Uzbekistan:

They offered useful suggestions for improving the course, including a group field experience at a site of environmental problems, use of videotapes and audiotapes of environmental coverage, small-group assignments, and use of more material by professional journalists.

For the development of a more complete course on environmental and science journalism, Freedman (2004: 160) suggested the need to incorporate examples of “written and broadcast

material”; “practical field reporting assignments”; and, “presentation and guest lectures by... journalists who cover these issues”.

Although many have provided criticisms and expressed concerns over the incapability of journalists to cover sustainability and environmental issues effectively (see section 2.10), very few have provided constructive suggestions on how improvements could be made. An exception being, a report by Keating (1994) that detailed examples of news excerpts and suggestions on how they might be framed differently to better reflect sustainability. Keating’s method may be constructively incorporated within the course, to build on student’s writing and news framing skills. Furthermore, the ‘message framing approach’ described in Chapter 6 has the potential to provide a way for improving the framing of S&E news.

Friedman (1979: 37) suggested the need for “real world experiences” in the teaching of environmental reporting. She noted: “It provides students with a depth and understanding of events far beyond what books and lectures can give. It is this depth that is needed for interpretive reporting” (*ibid*: 37-38). Fraley (1963: 328) noted that organisers of on-the-job training for science reporters believe “that if a science writer gets his hands dirty in the laboratory and his mind challenged by the strict requirement of research design, it will make him better able to interpret the ‘feel’ and ‘flavor’ of science to the public.” Providing an example of such a journalism programme at Lehigh University in the United States, Friedman (1979: 38) noted that the objectives of real world experiences within the programme were:

...to help the students understand and analy[s]e the complexity of scientific and environmental issues and then to help them write about these complexities in a probing, perceptive, and accurate manner. Interpretive reporting is emphasiz[s]ed at all times and real world experience is used to help make the students better interpreters of what they see (*ibid*: 38).

She concluded that real world experiences were a valuable component of a journalism programme as it “reinforces materials learned from texts and lectures...[and] encourages students to learn on their own – something they must do once they are on the job” (*ibid*: 41). She added:

Real world experience in science and environmental writing in particular, is a valuable preparation for the hard task that lies ahead for these future writers – communicating the news about science and technology clearly and accurately and assessing and interpreting that news so readers can understand the impact it will have on their daily lives (*ibid*: 41).

In Germany, Krönig (2002) observed that younger generation journalists do not have similar environmental concerns as their predecessors, and were quite often critical of traditional environmental journalism. Krönig noted:

They are fascinated by the rapid progress of modern information technology and draw optimism and belief in progress from this. This tendency is enhanced by an urban or metropolitan lifestyle, quite often far removed from any direct knowledge or experience of the natural environment (*ibid*: 9-10).

Drawing from Friedman's (1979) and Krönig's (2002) observations, it is stressed that in addition to knowledge and education about the environment and practical writing experiences, personal experiences with nature may be essential for the making of an excellent environmental journalist. The inclusion of such aspects in a journalism module on sustainability is hence recommended.

(ii) A need for emphasis on sustainability's multidimensional nature

Since several students indicated that they did not report on sustainability issues simply because their reporting areas were unrelated to sustainability – this appears indicative that a 'sustainability news angle' is not a norm in mainstream media news reporting. Furthermore, a few students indicated their uncertainty about the connections between sustainability and areas such as sports or politics. Hence, a special session could be included to build students' skills in identifying sustainability aspects in apparently unrelated stories. By referring to previous accounts on the relationship between sports and environmental sustainability, for instance, as those noted by Kaspar (1998) and Toepfer (2003), students may be taught how to detect these often indistinct links between sustainability and human activities. This is likely to be a crucial component of a journalism module on sustainability if the concept of sustainability is to become more prevalent across contrasting journalistic specialisations.

The need for a multidimensional approach in the teaching of environmental reporting has been previously identified. Environmental journalists in Friedman's (1994: 19) survey, for instance, provided the following advice on course contents, in order to improve the training of future environment journalists:

...an ideal education would be an undergraduate program with a combination of journalism and science courses and some background in economics and politics. Students need to know more about the complexities of risk and risk assessment, ecological relationships and environmental law...

Freedman (2004: 156) suggested that courses such as "biology, oceanography, chemistry, natural resource management, zoology, [and] horticulture," although not crucial for the coverage of environmental issues, may enable journalists to better understand the issues "and to explain scientific jargon and techniques." "When reporting on the environment," he suggested that such education "may provide a competitive advantage over journalists without that academic familiarity and background" (*ibid*: 156). Griffin and Schoenfeld (1982: 9) noted "the maintenance of formal or informal faculty liaisons with others in environmentally-related departments [through] joint projects, guest lecturing, and so forth" to be important for environmental journalism education. They suggested that "such activity maintains the interdisciplinary stimulation and input particularly necessary to the cross-cutting nature" of environmental problems (*ibid*: 9).

While knowledge in a variety of subjects has been noted to be necessary for the coverage of environmental issues, sustainability is inherently a multi-dimensional concept. Griffin and Schoenfeld's (1982) suggestions may be taken into account for further development of students' understanding of the multi-dimensional aspects of S&E issues. The module should ideally include clear descriptions about the multi-dimensional aspects of sustainability, in particular its indirect connections with the multitude of human activities. The need for recognition of the multidimensional aspects of sustainability when reporting related issues is discussed in further detail in Chapter 5.

(iii) A need for emphasis on sustainability's international aspects

While there may be a tendency to focus on local issues in such a module, many environmental problems are global in scope and some problems have proven to be transboundary. There is also a need for students to understand the local and global aspects of sustainability. For example, how international trade policies might positively benefit some countries while indirectly causing environmental, social and economic unsustainability in others. Grossman and Filemyr (1996: 177) had in fact suggested the need for a global viewpoint to environmental journalism:

An international perspective is vital in practi[s]ing – and teaching – environmental journalism. There are profound differences around the world in how the environment itself is defined, how environmental topics are addressed, and how far journalists are willing to go in questioning the status quo. These differences mark us as being from North or South, the richer nations or the poorer ones. Journalists in developing countries look at environment and development issues as inseparable. Overpopulation, hunger, and homelessness are considered critical environmental issues, as is international debt and the pressure it puts on small domestic economies to use up natural resources at an unprecedented rate. In the United States journalists often fail to make these kinds of connections.

Similarly, Freedman (2004: 160) suggested that it would also be advantageous to relate local ecological problems and improvements “to parallel problems and progress elsewhere and to illustrate how media in other countries report on those issues” (*ibid.*).

Because sustainability is a global aim and its achievement often requires cooperation at an international level, it is imperative that journalists are well educated on its international aspects.

(iv) The need to address the ‘quantitative balance’ vs. ‘weight-of-evidence’ approach and the objectivity-advocacy debate

A journalism module on sustainability should ideally address the issues of objectivity and balance in journalism, and the alternative ‘weight-of-evidence’ approach. Expressing a typical reaction of a journalist to what may have appeared to be a breach of journalistic balance and objectivity, one student in this study said that she found the module sessions to be “one-sided.” She explained:

...all the information seemed to come from the same school of thought. I am not sure, but I think there are contesting views. For example, there are scientists who believe that nuclear

energy is more environmentally sustainable than other forms. It felt a little bit like indoctrination – the same messages being thrown at us over and over and over...It made me begin to resist the message and start thinking about the possibility of alternative points of view. I lost interest half-way through and stopped focusing. I would still have to go to experts to gain information as I feel I do not know enough to speak with any authority.

The difficulty concerning journalistic balance that Tichenor (1979) noted in the teaching of science and environmental journalism in the 1970s remains well applicable today. Tichenor wrote:

It appears imperative for teaching [programmes] in science and environmental journalism to deal with the fact that scientific and technological information is part of an adversary process. The writer is confronted by a situation in which there are different organi[s]ed interests, each having a vital stake in the outcome. It may be a commercial view versus an agency view...It may be a dispute between agencies...Or, as happens frequently, it may be a group of citizens organi[s]ed in opposition to establishment of a particular facility, such as location of a genetics research laboratory or location of a nuclear waste disposal site. In all of these situations, journalists learn that technical information may be presented in voluminous detail in a struggle for supremacy and political control. With such being the case, what is the correct professional orientation for the journalist? (*ibid*: 6).

Tichenor, at that time, pointed out that there may not be any “simple prescription” or “school solution” on how such situations should be handled by the journalist (*ibid*: 6). This may well be the case for the teaching of sustainability issues reporting today. Sustainability issues are similarly adversarial in nature as they often involve debates such as the use of a resource for present-day development versus its conservation for future generations.

Although ‘balance’ is a long established professional standard in journalism, Tichenor notes that “there is serious question about its application” (*ibid*: 6). He cited the question of if a journalist should provide equal space to each, when faced with a situation where two conflicting bodies of evidence are presented over an issue concerning safety. Referring to this as “quantitative balance” Tichenor pointed out that it would be rejected by many writers who may prefer “to use instead the criterion of ‘scientific standing’ of the evidence” (*ibid*: 6). While, the credibility of evidence is a basic requirement, Tichenor pointed out that

applying standards of ‘scientific standing’ is no small task for writers, and no small challenge to teachers of communication. The conventional advice is to know the subject well; consult with a group of experts; or both. But even if this advice is followed, the question about application may remain unanswered if the experts disagree or are in doubt, as they may well be, and if the fate of several interest groups hang partly or entirely on their judgement (*ibid*: 6).

As has been detailed in Section 2.10.12 journalistic adherence to ‘quantitative balance’ has been observed to be problematic in the reportage of S&E issues and many have suggested the necessity for ‘evaluation’ and the ‘weight-of-evidence’ approach. A journalism module on sustainability should ideally include these debates and point out their implications for the practice of journalism.

In addition, Grossman and Filemyr (1996: 176) suggested that the advocacy vs. objectivity controversy in the practice of environmental journalism needs to be a central aspect considered when “deciding how to teach the subject.” There are likely to be differences between journalism

schools in the approach taught. For example, in the US, although objectivity is taught as a fundamental journalistic approach in the majority of college journalism programmes, Michael Frome, the director of the Environmental Journalism Programme at Western Washington University, regards objectivity to be problematic and teaches instead, advocacy journalism (Monaghan 1991). The objective approach is believed to result in articles that inconclusively provide different perspectives of an issue (*ibid.*). In the approach Frome uses, students are encouraged to conduct careful research, examine the entire range of debates and positions, critically evaluate them, and inform audiences about what seems best for the environment (*ibid.*). In addition to being accurate and just in presenting the issues, students are encouraged to state their opinions and draw conclusions (*ibid.*).

On the other hand, environmental journalists in Friedman's (1994: 19) US-based study "urged educators to teach students to be skeptical and objective and to establish a high standard for truth." Freedman (2004: 15) incorporated what he termed "ethical considerations" in the environmental journalism programme that he designed for journalism students in Uzbekistan, which included "reasons why journalists should maintain objectivity and neutrality in reporting, regardless of their personal opinions on contentious issues." He found this to be a "difficult message to convey persuasively" as Uzbekistan was a "relatively young country where many journalists believe that the press has a patriotic duty to play a supportive role in nation-building and where most journalists work for government-owned, controlled, or affiliated news outlets".

Dennis (1991: 60-61) maintained that the advocacy-objectivity debate in environmental journalism is an important one and that it is "also one that will fuel the suspicions of news executives who are always on the lookout both for self-serving special interests and for reporters who have lost their objectivity." "However worthy the issue or cause" Dennis says, "the goal of marshalling and shaping public opinion causes nervousness among journalists and media owners who think such advocacy could compromise the essential independence and integrity of the press" (*ibid.*: 61).

Regardless of the approach a journalism school uses, it is essential to bring forth a discussion on the objectivity-advocacy debate and the 'quantitative balance' vs. 'weight-of-evidence' approach in the teaching of S&E issues reporting, as students are likely to be faced with these conflicting approaches in later stages of their career.

(v) A need for journalism textbooks and guides on reporting sustainability

Grossman and Filemyr (1996) noted that since reporting on environmental issues was a relatively new area in journalism practice at that time it was a new subject under consideration in the journalism curriculum of colleges and universities. They observed that although media coverage of environmental issues was increasing in prominence, no central textbooks existed as a guide for

teaching environmental journalism. “Most journalism texts” they observed did not “even include a chapter on this topic” (*ibid*: 179). In the case of Uzbekistan, Freedman (2004) reported that there were “no environmental journalism textbooks or reference books available in Uzbek”.

A review of literature for this thesis found the existence of several handbooks and guides for environmental reporting; for example, *Covering the Environmental Beat: An Overview for Radio and TV Journalists* (Prato 1991); *Environmental Issues for the '90s: A Handbook for Journalists* (Logan 1992); *Covering the Environment: A Handbook on Environmental Journalism* (Keating 1993); *Pesticides and the Press: A Journalist's Guide to Reporting on Pesticide Issues* (Covello 1992); *Ten Practical Tips For Environmental Reporting* (Nelson 1995); *The Reporter's Environmental Handbook, 2nd Edition* (West *et al.* 1995); and, *The Reporter's Environmental Handbook, 3rd Edition* (West *et al.* 2003). Frome's (1998) *Green Ink: An Introduction to Environmental Journalism* provides an alternative view of environmental journalism and emphasises advocacy journalism. In addition, several textbooks on journalism and news reporting that have included aspects of environmental reporting were found (e.g. Lanson and Fought 1999; Rajan 2005; Willis and Okunade 1997).

Sustainability as a topic, however, remains absent within the majority of journalism textbooks and there appears to be no guidebooks for reporting sustainability. Even the most recent edition of *Journalism: A Guide to the Reference Literature* by Cates (2004) which provides an up-to-date bibliographic guide to the literature in print and broadcast journalism, did not include any references for sustainable development or sustainability. Although sustainability and the associated environmental issues are global in scope, Herbert's (2001) *Practising Global Journalism*, does not mention any of these aspects. Nevertheless, some changes to this trend are starting occur. For example, West *et al.*'s (2003) third edition of *The Reporter's Environmental Handbook* included aspects of sustainability that were absent in the preceding edition. Another example, worth mentioning was Sharma's (2005: 121-122) recent publication – *Journalism: Reporting* – which included the following three paragraphs under the heading “Reporting on Sustainable Development”:

The term ‘sustainable development’ was populari[s]ed by the report of the World Commission Environment and Development (WCED). To some, sustainable development is a long awaited call for political recognition of global environmental decay, economic injustice and limits to material growth. The decline in environmental quality has however underlined the need for harmoni[s]ing the logic of economics with that of ecology.

The sustainable development represents an opportunity for humanity to correct a historical error and develop a gentle, more balanced, and stable relationship with the natural world.

A total reorientation is required in development reporting in India. When writing about any development project, you must ask questions like how it will improve the quality of life of the people without damaging the quality of air, water and soil and also without eroding the moral and social values.

However, sustainability is a highly complex topic to report on and would require an in-depth understanding of its various dimensions. The publication of a more comprehensive journalism guidebook on reporting sustainability may hence be timely, to serve as a teaching guide for journalism educators and as a quick reference guide for working journalists.

(vi) Reference materials and guides to resources

Three students in this study pointed out the lack of handouts:

I like personally to have handouts about what the speakers have gone through, so I can refer back to it. For example the power point presentations. Maybe we got just one handout. I can't remember.

Handouts would be good, so that people can look over it. And if I am going into the world, it would be something I can look up in five years time. Even a single document that combines what we were doing – that would have been good.

Perhaps if each speaker had an A4 page of the key points that they made so that you can refer back. A lot of the lectures – there was just about a hundred good stories that we could have written in there but, because there was just so much information all at once and you are trying to take it all in, it was hard to remember back and think what stories were in there. Maybe key points that each speaker made would be good.

A journalism module on sustainability should ideally include updated guides to resources and references that students could refer to at later stages in their career. Grossman and Filemyr (1996) included such a list of resources (that included books, articles, periodicals, films, audio cassettes, videos and websites) in their proposed course plan for an environmental journalism programme. In addition to handouts that included news articles and press releases, Freedman (2004: 158) supplied students with a list of websites that included those of international organisations such as the UN and the World Conservation Union, the “International Federation of Environmental Journalists (www.ifej.org)”, “Investigative Reporters and Editors (www.ire.org)”, and “sites that distribute environmental news such as Eurasianet (www.eurasianet.org) and Environmental News Network (www.enn.com), as well as sites with scientific data.”

(vii) Module time-frame

Journalism programmes are often described to be intensive; hence, the time-frame of a module on sustainability within a journalism programme needs to be carefully considered. This may be a dilemma as considerable time is often required to teach S&E issues. For example, environmental journalism educators in Friedman's (1994) study indicated time constraint to be one of the problems they faced. They “indicated that there was just too much to teach in one course and that they needed more time to deal with the science, technology and law involved in environmental issues” (*ibid*: 11). Friedman (1979) cautioned that providing students with additional components such as real world training in environmental journalism programmes may pose a problem as students may already be overloaded with other courses.

Two students in this study (quoted below) felt that the module was too lengthy and that some sessions were repetitive:

Some of the stuff was a bit too long; you began to not learn from it anymore. Some of the modules came up – and we had already been informed about [the issues in the preceding session] for over two hours. So it became hard to focus.

Was very repetitive and could have been compacted into maybe two classes. It was overdone in comparison to other subjects, such as “diversity in culture”. We are even more bombarded with information than the average person, and probably have lower attention spans. I switched off after a while, particularly when faced with long rafts of facts and figures and diagrams...We are very busy and I think our time could have been more wisely spent.

A third student who had observed others getting bored suggested:

If...possible...have all these people, all in one day, like a forum. It was good to have four sessions, but people started getting bored with yet another long talk. With a forum, there might be more opportunity to cover areas that might not have been covered. And more room for questions. Or maybe two sessions with pairs of speakers.

Two students, on the other hand, felt that four sessions was just the right amount:

I think four sessions is enough. Given that they are not assessed I think it could be difficult to attract students to more sessions than that as the year is already so busy. Also four sessions is enough to get a basic grasp of the issues and the role that we as journalists can play concerning sustainability issues.

The length of it was probably about right. You could not have gone on any longer and sustained anyone’s interest. It was still fresh enough to be interesting after four sessions.

One, in contrast, believed the module duration to be insufficient to cover such a broad a topic. She said:

Four hours studying, listening to people talk about a really broad topic, is probably not enough. But as journalists we’ve got to learn a bit about everything. It was enough, it was definitely enough. But I wouldn’t take what I learnt just from there, I’d always investigate further. It probably was a good introduction.

Considering students’ time constraints, the development of future modules on sustainability would require careful planning. Contents may need to be made concise and repetitions minimised.

(viii) Communication appeal used by presenters

Three students in this study indicated that they found the sessions to be quite depressing. The first said: “I think it [broadened] my awareness of the world – [that] there are a lot of environmental issues out there. It is kind of depressing in a way...”. Similarly, the second student said:

I also found the lectures quite depressing – learning just how poor we as a society in looking after our environment and the damage that we have already caused. Also how difficult it is to change people’s actions and mindsets. Not until people do not have something anymore, like running out of clean water, will they do anything about it and then it is too late. We seem to have all the knowledge about what we are doing to our environment and how we need to alter our treatment of it and yet the majority of people do nothing. The problem seems to lie in the social side – changing people’s mindsets. We are a “now” generation – thinking only about the present rather than looking after our future and those of future generations.

The third said: “It was quite depressing at times to be honest. It was not exactly happy stuff”. In another area of discussion this student also expressed a feeling of powerlessness. She said, “I have been educated on that. But I don’t feel a huge change on the fact that I can physically do anything, other than write about it I guess”. In a similar way to the second student, she too apprehended the difficulty in bringing about behavioural change in society. She said: “I don’t know, as I said before, I see a long long road ahead for the people who want to try and change the course of the world in terms of what is happening here.”

These somewhat negative responses may perhaps be partly due to the manner in which the information was communicated in the four sessions of the module. The communication appeal that the speakers used in their presentations may have resembled the ‘doom and gloom’ approach (Webster 2004) or the ‘sick baby’ appeal (Obermiller 1995) discussed in Chapter 6. As Webster (2004) pointed out, although it may be necessary to first gain an understanding of what is unsustainable, in order to understand the meaning of sustainable development and the necessity for action, overwhelming people with information may result in counterproductive effects such as indifference or denial. In addition, others have observed counterproductive effects such as desensitisation (Nelson 1998), helplessness (Levin 1993), and a feeling that the problems are insolvable (Oskamp 2000) as a result of such a communication approach.

Fine (1990 *cited in* Obermiller 1995: 55) observed that the “sick baby” appeal, a commonly used approach in social marketing, is based on the assumption that a focus on the problem and its severity would persuade audiences of its importance. Considering the possibility that communicating the severity of a wide array of social problems may make the problems seem insolvable, Fine proposed the “well baby” appeal as an alternative. While the “sick baby” appeal increases concerns about the problem, the “well baby” appeal instils a belief that something can be done to solve the problem (*ibid.*). Hence, the essence of the “well baby” appeal is the assertion of the potential positive impact of individual action (*ibid.*). To some degree the speakers in this module may have conveyed a “well baby” appeal in their communication by emphasising the role journalists can play in public information. For example, one of the above students added:

However, I also think this was a good reaction as it shows how I really didn’t know the extent of the damage that we have caused and thus they have woken me up to the fact that action needs to be taken now and we as journalists are in a powerful position to help make that change a reality.

Considering this outcome, it is suggested that future modules or courses on sustainability for journalism students could be improved by providing a combination of both types of appeals in the sessions. This ensures that students become aware of the severity of the problems, while also being aware of what they can do to make a difference as individuals and as journalists. To some degree,

the teaching of environmental journalism may need to take into account theories and recommendations for effective communication, some of which are provided in Chapter 6.

(ix) Advancing environmental journalism as a viable career choice

Students of journalism may perceive environmental journalism to be one that lacks career prospects as expressed by one student in this study. The perceived viability of environmental journalism as a career choice may depend on the extent of media coverage of S&E issues and the existence of such a specialist position within media organisations. Nevertheless, educational institutions may play a role in advancing environmental journalism as a viable career choice. For example, Freedman (2004) suggested that when proposing and designing the curriculum for environment journalism, educators need to show how such a course might support and strengthen the institution's reputation and student's career prospects.

(x) Other education options for students aspiring to take environmental journalism as an area of specialisation

Any transition in the journalism curricula to incorporate distinct programmes in S&E issues reporting is likely to take time. Orr (1996: 7-8) maintains that in spite of "all the clear evidence of spreading environmental problems, this message has not made much headway in the vast majority of colleges and universities". As mentioned earlier, others have pointed out difficulties and constraints universities face in embracing education for sustainability.

Referring to educational institutions in Central Asia, Freedman (2004: 160) concluded:

...it is unclear whether university journalism departments are willing to make environmental reporting a permanent part of their tradition-driven curricula, although doing so would be a significant step in preparing emerging journalists to cover newsworthy issues, conflicts, and events of high public interest and concern.

In cases where a specific programme on environmental journalism is unavailable, a student seeking a career as an environmental journalist may consider the two options in terms of educational preparations that Warner (1992: 103) suggested:

Pursuing a bachelor's degree in journalism, with elective classes in environmental sciences, would provide a good foundation for this type of work. The other approach, equally as good (and maybe better!), is to earn a degree in environmental sciences, and take elective classes in journalism, English, and other communications subjects.

However, the feasibility of Warner's approach for students in New Zealand is subject to further enquiry.

4.4 Conclusion

The impact assessment conducted in this case study illustrates that even an introductory level module on sustainability may advance students' understanding of sustainability and their interest in reporting related issues. Students exhibited a significant increase ($p=0.003$) in understanding of sustainability after undergoing the module. This was further supported by self-reported impacts of 91% of students who indicated that the module did enhance their understanding. Although increase in interest in reporting sustainability issues was not statistically significant ($p=0.187$), a qualitative examination of answers showed that 55% exhibited an increase in interest at the post-course stage. In self-reported impacts, 82% said that they experienced some level of increase in their interest in reporting S&E issues, as a result of the module. Although the module did not motivate students to take on environmental reporting as an area of specialisation, an important impact was their realisation that sustainability was an angle that could be incorporated in other areas of reporting. The responses many students provided were also indicative that they became more sensitive to the need for increased media coverage in order to enhance public awareness. At a lesser extent the module also impacted students' personal beliefs about sustainability and brought about a realisation of remedial actions that could be taken at an individual level.

While the strength of the above findings are acknowledged to be somewhat limited (due to the small sample size), these findings are nevertheless important indicators of the potential impact that may result from the 'educational approach' of including such a module within the journalism curricula. Furthermore, a long-term impact assessment showed that in one case, a student was able to apply what she learned from the module to her job as a journalist when she covered sustainability related topics. This suggests that such a module can impact on future reports that students produce as journalists. As Friedman (1994: 19) asserts, "as environmental journalism education continues to grow and mature" in the long run, it "can only lead to more sophisticated coverage of environmental issues and a better informed public."

Even so, this study found that most New Zealand tertiary institutions have not included sustainability as a significant component within their journalism curriculum. A survey of working journalists covering rounds related to sustainability in various New Zealand media organisations, as reported in the following chapter, found that a majority of 91% indicated that their formal education had not included environmental or sustainability issues reporting – lending further evidence to the lack of courses on environment or sustainability in New Zealand's journalism curricula. Hence, most journalists entering the workforce may be ill-equipped to cover related issues. This may be associated to the numerous reports expressing concerns over the lack of quality and inadequacies in media coverage of these issues in New Zealand (e.g. Bell 1994; Dew 2001; Hager and Burton 1999; Henderson and Weaver 2003; Rupar 2007; Spellerberg *et al.* 2006).

Considering the complexities of sustainability and environmental issues, it appears almost unreasonable to expect journalists to produce high quality reports without prior education.

When offered as a regular component of the journalism curricula, this 'educational approach' may offer several advantages when compared to the earlier examined approach of offering mid-career training in environmental reporting to journalists in employment. Firstly, as noted in Chapter 3, mid-career training programmes are often organised on an *ad-hoc* basis and thus not all journalists would encounter an opportunity to participate in such training. Environmental journalism incorporated within the journalism curricula, on the other hand, ensures that all journalists start work with at least the essential background knowledge of this field. Secondly, mid-career training programmes tend to be costly to organise and are hence often dependent on the availability of funding and sponsorship. Thirdly, coming from understaffed newsrooms journalists may find it difficult to obtain time-off to attend training. Sachsman *et al.* (1988: 289) observed that "it is often difficult to bring...journalists together for a continuing education program." This will not be an issue for a class of journalism students. In addition, Becker and Lowrey (2000) pointed out that mid-career training programmes are usually short-term in nature. This may mean a limit to what can be included in the training. A semester-long course on environmental journalism, on the other hand, is more capable of providing the time needed for students to learn this complex reporting topic. Moreover, Becker and Lowery noted that journalism training outside academic settings are "often judged to be inadequate to the task of journalism training because of historical traditions and contemporary limitations due to inadequate resources" (*ibid*: 1).

Considering the limitations of mid-career training programmes, journalistic knowledge to cover the complex subjects of environment and sustainability could be addressed at the pre-conception stage of a journalists' career, i.e. within the journalism curricula. As detailed in Section 2.12.3, numerous reports have indicated that a major problem journalists' face when covering these topics is a lack of related education and training. Therefore, it may be argued that tertiary educational institutions have a significant role to play in terms of providing future journalists with relevant education on S&E issues. As the *New Zealand Journalists Training Organisation* sets the standards for journalism training in New Zealand, inclusion of environment and sustainability as a topic within the *unit standards* may encourage the inclusion of courses or modules on S&E issues reporting within the journalism curricula.

In brief, despite some limitations, the findings of the case study in this chapter does lend further evidence to the potentials of the 'educational approach' as a method for achieving improvements to mainstream news media coverage of S&E issues. However, at present, S&E topics appear to be lacking within the journalism curricula in New Zealand. The subsequent chapter will introduce the 'social responsibility approach' which suggests that a certain degree of mainstream media

receptiveness towards a responsibility in communicating S&E issues would first be necessary for improvements to occur in their coverage. This approach has some indirect connections to the currently examined ‘educational approach’ considering that tertiary education providers are likely to initiate changes within the journalism curricula if there was a clearly expressed social responsibility on the part of the media in the form of a *principle of media responsibility in environmental education* or a *media environmental policy* – as this indirectly indicates a demand from media organisations for journalists educated in S&E topics.

Chapter 5

Mainstream Media Receptiveness towards a Responsibility in Communicating Sustainability: An Exploration of the ‘Social Responsibility Approach’

“...I realized that the sole aim of journalism should be service. The newspaper press is a great power, but just as an unchained torrent of water submerges whole countrysides and devastates crops, even so an uncontrolled pen serves but to destroy.”

(Gandhi 1927: 211)

5.1 Introduction

Speaking of his experiences as an editor and journalist of the *Indian Opinion*, Mahatma Gandhi stressed the significance of journalistic responsibility to the public because of the power they had over public opinion. He wrote:

I was inundated with letters containing the outpourings of my correspondents’ hearts...It was a fine education for me to study, digest and answer all this correspondence. It was as though the community thought audibly through this correspondence with me. It made me thoroughly understand the responsibility of a journalist, and the hold I secured in this way over the community...(Gandhi 1927: 211).

However, Vilanilam (2005: 82) pointed out that a major difference between “Gandhian journalism” and present-day journalism was that Gandhi had “considered journalism primarily as service to society”. “Modern-day publishers and editors”, in contrast, “look upon their work primarily as business – like any other business, motivated by considerations of profit, economic advantage and social prestige” (*ibid*: 82). He went on:

...service to the people as the sole aim of journalism will not be acceptable to the media moguls of the 21st century who build their media empires in conglomerate or cross media ownership style...or in collaboration with foreign media firms primarily for profit. Service to people based on national priorities is secondary or even incidental. Lord Thomson, a 20th-century press baron who is the model for modern newspaper and media magnates such as Rupert Murdoch, openly declared his purpose: he ran his newspapers to make profit and buy up more newspapers to make more profit. ‘The bigger the better’ is the principle of these businessmen-journalists or journalist-businessmen, whereas ‘small is beautiful’ inspired Gandhi (*ibid*: 82-83).

Even so, as we have seen in Section 2.8 of this thesis, many have recently highlighted the media’s responsibility in propagating sustainability and the media’s educational role in particular. Some have even suggested the necessity for internal media policies or codes of practice, for improvements to media coverage of sustainability and the environment (e.g. Chait 2002; Michaelis 2001; Porter and Sims 2003; Spellerberg *et al.* 2006). Collectively these suggestions give rise to the need for a ‘social responsibility approach’ to achieving improvements to news media communication of sustainability and environmental (S&E) issues. This research proposed that such

a responsibility may be conveyed by the media in two ways – a *principle of media responsibility in environmental education*, and a *media environmental policy*. However, since these have been hardly proposed as such, nor have they been formally examined, little is known about present day mainstream media receptiveness towards such a responsibility.

Because S&E issues appear to receive less coverage relative to other news topics, many, as exemplified in Section 2.10, have expressed frustrations that these topics are sidelined or ignored by the news media. However, assertions of difficulties in gaining mainstream media coverage for these issues are often not substantiated with actual accounts of cases where media organisations declined or refused coverage. As detailed in Section 2.9, it is also possible that such assertions are made based on the assumption that commercially driven media organisations are unlikely to carry content that may be financially harmful to their advertising investors. For example, Edwards (1998) suggested that the media may act favourably towards advertisers because of their reliance on revenue from advertising. In addition, he argued that since the media are made up of large business corporations with profit maximisation aims and have close associations with the stock-market, this “immediately suggests that media corporations might have a tendency to be sympathetic to corporations, to the status quo and to the profit-maximi[s]ing motive of the corporate system – given that they are part of that system” (*ibid*: 18). Therefore, he says, it appears “uncontroversial to suggest that the ultimate parental power in the media system might have some influence over what comes to be reported” (*ibid*: 18). Arguments as provided by Edwards and other criticisms of the media concerning their coverage of S&E issues, as reviewed in Section 2.10, are aplenty. However, there appears to be relatively little documentation of media responses towards such criticisms.

The above identified lacks in enquiry led to the key aim of the present case study of this chapter – that is to explore the viability of the ‘social responsibility approach’ by gaining feedback from newsmen about their receptiveness towards the roles and responsibility that others have prescribed for them and their views about some of the related criticisms that have been put forward. While some studies, in other related contexts, have analysed the perspectives, backgrounds, knowledge and experiences of environment reporters⁵¹, relatively few have attempted to gain perspectives from media decision makers; some exceptions being studies by Maloney and Slovonsky (1971); Althoff *et al.* (1973); Chapman *et al.* (1997); and SustainAbility, Ketchum and UNEP (2002). Hence, in gaining the above mentioned feedback, this study included reporters as well as media managers as target groups. The latter group were of particular importance, as they are the decision makers who ultimately decide on the issues that are to be covered in the news media. In specific, the objectives of this case study were to:

⁵¹ See for example, Archibald 1999; Detjen *et al.* 2000; Sachsman, Simon and Valenti 2002, 2004, 2006; Salomone *et al.* 1990; Yang 2004; Vestal and Briers 2000; Wilson 2000; Witt 1974.

1. Gain an understanding of the status of S&E issues reporting in New Zealand mainstream media, as perceived by interested parties, such as scientists, environmentalists, advocates, and the public through a review of literature.
2. Assess the degree of priority given to S&E issues by the mainstream media.
3. Provide an assessment of reporters' understanding of sustainability, the problems and constraints they face, and their needs in order to improve coverage of sustainability issues.
4. Comparatively explore judgements of newsworthiness made by newspersons and those made by sustainability advocates and proponents.
5. Attain newspersons' responses towards criticisms and concerns that have been expressed in relation to S&E issues reporting.
6. Gain an understanding of media receptiveness towards a responsibility in communicating S&E issues, particularly towards an educative role thus an assessment of their receptiveness towards *a principle of media responsibility in environmental education*.
7. Determine the existence of policies, codes of conduct, or 'corporate social responsibility' aims that require the inclusion of sustainability issues in content or programming, and the receptiveness of the media towards such *media environmental policies*.

As has been introduced in Chapter 1 of this thesis, the above 'social responsibility approach' is one of three approaches examined in this thesis. Chapters 3 and 4 have provided an exploration of the 'educational approach'; the following Chapter 6 will examine the 'message framing approach' and, Chapter 7, the conclusion chapter of this thesis, will draw together the key findings of the four case studies examined in this research, and note other interconnected aspects that would need to be considered for the viability of these approaches in the real world.

In summary, in spite of the many criticisms of media coverage of S&E issues and the remedial actions that have been proposed in terms of the need for enhanced media social responsibility in this area, little is known about the media's responses towards these criticisms or their perspectives about the responsibility they are expected to have in their coverage of these issues – therefore little is known about the viability of the proposed 'social responsibility approach'. This case study suggests that gaining perspectives directly from the mainstream media sector can provide a clearer understanding of the media, their receptiveness to the proposed social responsibility and hence their potentials in communicating S&E issues. Such an understanding may also result in a clearer perspective of areas for cooperation between the various stakeholders of sustainability and the mainstream media sector.

5.2 The status of environmental and sustainability issues reporting in New Zealand mainstream media: A review of literature

In earlier accounts, ecologists in New Zealand had attributed the enhancements in public awareness of environmental issues partly to media coverage. At a 1976 conference celebrating the twenty-fifth anniversary of the New Zealand Ecological Society (NZES), Allen (1977) remarked: “Twenty-five years ago... ‘environment’ and ‘ecology’ were words which were hardly ever seen in the popular press and only vaguely understood, if at all, by the man in the street” (*ibid*: 8). Allen commented that developments of environmental communication in the mass media was a likely factor that had “contributed to the rapid growth of environmental awareness” (*ibid*: 9). In the following year, in a presidential address for the NZES, Batcheler (1978) commented that the news media provided good coverage of ecological issues. He noted:

Articles on change of climate, pollution, population policy, maintenance of agricultural and forestry systems on a fossil energy base, conversion of native forests into exotic forest and farm, and conservation and management of fisheries, are discussed and described almost daily by the press. Ecology, or at least a caricature of it, has metamorphosed from being an obscure part of Natural History into a household, lecture room and a mass-media word (*ibid*: 3).

More recently, however, the NZES expressed concerns over the lack of media coverage of environmental issues, and saw the need to engage a media liaison, in order “to achieve greater media coverage for ecological science stories and issues” (Sawyer 2006: 5).

Other studies have questioned the quality of coverage. For example, in a study of climate change news coverage in New Zealand daily media in 1988, Bell (1994) found some cases of overstatement of the advance of climate change and inaccuracies such as misuse of technical terms, wrong figures, and confusion of scientific facts. In a Wellington-based study on media coverage of earthquakes, Dew (2001) reported that both the community and scientists alike expressed a distrust of the media. Although scientists were somewhat satisfied with media reporting of their research, they discovered inaccuracies in 57% of related articles. A common concern scientist expressed was “that of sensationalism and of portraying the most extreme or worst case scenario, and also the creation of a greater sense of certainty than the science would allow” (*ibid*: 10).

Referring to articles from New Zealand daily newspapers, Hager and Burton (1999) noted how some environmental and business reporters compromised journalistic independence and balance when swayed by the public relations tactics employed by *Timberlands West Coast Ltd*⁵². They described how in an effort to gain favourable media coverage, Timberlands took “potentially sympathetic environmental and business reporters” as company guests on strategically organised “three-day tours of the West Coast” (*ibid*: 112). They detailed how such tours eventuated in biased news reports:

⁵² Timberlands West Coast Ltd. is a state owned forestry enterprise based in the West Coast region of New Zealand. See www.timberlands.co.nz for further details.

Everything was very carefully planned and controlled, taking the visitors to model logging sites where it was hard to pick where the trees had been removed. More important, the journalists were accompanied by top company officials, allowing long hours of talking as Timberlands staff tried to convince their captive audience to their point of view. Evenings of wining and dining with the senior staff provided an opportunity to build up friendly relationships.

The journalists often rewarded this attention with large feature articles, in which only token, and sometimes no mention at all, was made to opposing viewpoints (*ibid*: 112).

In their investigation on public understanding of genetic modification in New Zealand, Henderson and Weaver (2003: 27) reported that many respondents “blamed the commercialisation of the media, and television in particular, for what they defined as ‘sensationalist reporting’ of genetic modification which [lacked] in facts and depth of coverage.” A particular concern expressed by health professionals in their study related to transparency of information. Henderson and Weaver found that many “felt alienated from the debate about genetic modification and felt they had no power to contribute to that debate” (*ibid*: 17). They asserted that this was of concern considering the New Zealand government’s assumption that there was sufficient “public consideration of genetic modification to the release of genetically modified organisms into the nations’ environment” (*ibid*: 17).

In investigating the transparency of journalists’ newsgathering process in the coverage of genetic engineering in the New Zealand press, Rupar (2007: 127) found that the majority of news reports lacked indication of “place, time and means by which the information” was obtained. In a discourse analysis of a news article titled *Trade Fears for GM Labels*, dated 19 April 2002 in *The Dominion Post*, Rupar observed that the most newsworthy elements in the article were two contrasting political views about the labelling of genetically modified food and its connection with a free trade agreement with the United States. This was regarded to be a typical format of media text “where balance and objectivity [are] obtained by citing two sources with two different opinions” (*ibid*: 131). The problem with such news reports, Rupar observes, was “that they generate knowledge about the different standpoints among political agents while hiding facts that could help readers form their own opinions for debate” (*ibid*: 139). Rupar suggested that this lack of transparency of the newsgathering process may be a result of what she terms an “Anglo-American understanding of objectivity” which fairly expresses the position of opposing sides, but rejects interpretative reporting (*ibid*: 127).

In their analysis of the portrayal of environmental issues in New Zealand free-to-air television, Spellerberg *et al.* (2006: 140) reported that such contents were minimal and noted that “New Zealand television does little to portray environment matters as important issues.” They found that although the network did air some “environmentally-oriented programmes” it comprised less than one percent of total broadcasting time. They found most of the programme material to be entertaining rather than informative. In addition, they noted that the more environmentally-oriented

programmes such as *Earth Report* were aired in the early hours of the morning. The environmental issues occasionally aired in prime time news tended to be “presented as environmental disasters or crises and often focused on issues with visual impact” (*ibid*: 139). They also found news reports to be limited in range with a focus on conservation and protection of species, with no discussion of sustainability; and hence, did not reflect scientific efforts towards environmental sustainability or the related public opinion. They concluded:

...New Zealand national television is, in terms of programmes on sustainable development, both unbalanced and biased. There is an overall lack of programmes and news items about the state of the environment and about environmental sustainability. We suggest that New Zealand national television has a moral responsibility to address this bias and imbalance (*ibid*: 145).

Also suggesting a form of media responsibility, Doug Craig, a community sustainability planner suggested that in addressing climate change, it could “be useful for both radio and TV to restart the public service advertising that they used to do” (Craig 2007: 3). Referring to previous public service campaigns in New Zealand broadcast media, “Firewise” and “Waterwise,” he suggested a campaign that might be called “Climate Change Wise” (*ibid*: 3).

As detailed in Section 2.9, another shortcoming of the media that many have noted to be an impediment to coverage of S&E issues is their commercial interests. New Zealand is not exempt from this situation. As Collins and Rose (2004: 32) point out, New Zealand media are largely owned “by big companies that exist purely to make money for their shareholders.” They went on to add its detrimental consequences:

The result in New Zealand is that most news media select the stories that are covered, and decide on their placement in newspapers and news bulletins, on the basis of day-by-day monitoring of which stories achieve the highest sales or audiences. Almost subconsciously, journalists absorb the resulting ‘news values’ that sell: emotion (including conflict, sex, race, violence, death); the unexpected (usually the negative); striking visual images; relevance to the audience; elite ‘celebrities’; and humour. Stories are written and rewritten to exaggerate these elements, leaving out other material that might ‘bore’ people. The results are often grossly misleading, alarmist headlines that induce excitement, fear or resentment but seldom understanding (*ibid*: 33).

Comparing their biennial surveys of public perceptions of New Zealand’s environment, Hughey *et al.* (2004) reported an increase in the percentage of respondents who reduced or restricted electricity use between the years 2000 and 2004. They reasoned that one reason for the change could have been the increased level of attention given to energy matters in the media. On the other hand, they found that New Zealanders perceived the condition of natural resources to be in a good state although this was contrary to the actual state of the country’s biodiversity. They noted that the reason for the “dissonance between science and perceptions for these items [was] unknown” and that further research was necessary to ascertain causes (*ibid*: 78). Miller (2002: 61), however, asserted that the “disconnect between [public] perception and reality can be attributed only to the media stories that created these perceptions in the first place.”

In a recent publication, Early (2006), gave some grounds for optimism:

In the scramble for 7p.m. viewers, TV3's *Campbell Live* has recognised that there is an audience for environment and sustainability issues. It's not perfect, and often the choice of experts is questionable, but it shows a determination to tackle issues which don't make it into the locally-made documentaries (of which there is now a real paucity) but need more than a six minute 'package' between ad-breaks (*ibid*: 13).

Early also commented that environmental stories were "starting to receive more attention in the print media" (*ibid*: 13). He explained how his own experiences in working with newsmen showed that newsroom gatekeepers were becoming more interested in these issues:

This was confirmed recently when I organised, again with some Lincoln colleagues, an 'environmental reporting forum' for The Press. The concept was enthusiastically received by management and well attended. For the first time, the key people involved in gathering and selecting the news were able to meet with environment experts of all persuasions – scientists, policy makers, regulators etc – to critique current practice and explore fresh approaches to reporting the environment.

These trends will continue. Environment and sustainability issues will, I believe, gather such a momentum that a new paradigm emerges to replace the dominate mindset based on property rights and the liberal political-economy. And as that happens, ecologists, beards or not, will be seen in an entirely different light (*ibid*: 13-14).

In a similar way, a few other recent accounts of New Zealand media coverage of environmental issues have been positive. For example, Weaver and Motion (2002) found that a draft public relations document on genetic engineering leaked to the media by the Green Party led to substantial nation wide media coverage of the issue. They reported that the media were instrumental in exposing the "propaganda and secrecy" which in turn led to "public knowledge of, and concern about public relations' role in managing the issue of genetic engineering" (*ibid*: 341). In their comparative content analysis of media coverage of global warming, Dispensa and Brulle (2003: 74) reported that while the U.S. media portrayed global warming as "controversial and theoretical," *The New Zealand Herald's* portrayal of the issues was consistent with what was "commonly found in the international scientific journals." While over 50% of the U.S. articles expressed "uncertainty related to the global warming theory", in comparison, they found that less than 9% of the New Zealand articles expressed such uncertainty (*ibid*: 96). They reasoned that since the fossil fuel industry was not present in New Zealand, the lack of vested interest allowed the New Zealand media to reflect instead the scientific consensus on global warming.

In addition to the above, "environmental journalism awards" that have been recently presented to individual journalists in New Zealand, for example, the *Environment Bay of Plenty Environmental Journalism Award*⁵³ and *Environment Canterbury Award for Excellence in Environmental*

⁵³ In 2006, the Environment Bay of Plenty Environmental Journalism award was conferred to Monica Holt, a radio journalist, and to Carly Udy, a print media journalist. For details, see: www.envbop.govt.nz.

*Journalism*⁵⁴ also provide signs of recognition and appreciation of quality media reporting on the environment.

In brief, although earlier accounts of media coverage of environmental issues were positive, some recent accounts have expressed concerns over the quantity and quality of their coverage. Nevertheless, despite their shortcomings, advocates and proponents of sustainability in general, regard the mainstream media in New Zealand to be important channels for public communication.

5.3 Methods and research design

5.3.1 Target population

The primary target population of this study consisted of two newsperson categories – *reporters* and *media managers* from various mainstream news media organisations in New Zealand. Borrowing the terminology and definition by Althoff *et al.* (1973) *media managers* in this study included individuals in decision-making positions from newspaper and broadcast organisations. The term *reporters* include those in the employee category who report to other individuals higher in the newsroom hierarchy. The research also included a sample of sustainability advocates and proponents, hereafter referred to simply as *proponents*, for the purpose of a comparative assessment for one research question.

5.3.2 Development of research instruments

In designing the research instruments for the above two newsperson categories the majority of survey questions were constructed based on the criticisms, concerns, and issues that have been raised, and suggestions that have been put forward in the literature concerning media coverage of S&E issues, as has been detailed in Section 5.2 above and in Chapter 2.

For reporters, an e-mail questionnaire format was employed. The questionnaire was administered in two parts. The first sought reporters' background and their understanding of sustainability. The second part provided definitions of 'sustainable consumption' and 'sustainable development' to avoid *uninformed response error*⁵⁵ to subsequent questions. Considering reporters' busy schedules, the majority of questions were of the fixed-response type, which was assumed to require lesser response time compared to open-ended questions. Considering the possible effect the sequence of

⁵⁴ The 2006, Environment Canterbury Award for Excellence in Environmental Journalism went to Tim Cronshaw of The Press. For details, see: www.ecan.govt.nz.

⁵⁵ As described by Hawkins and Coney (1981: 371) *uninformed response error* refers to answers to "a question despite a complete lack of specific knowledge about the issue raised by the question." See Chapter 6 (Section 6.3.8) for a more detailed discussion on uninformed response error.

items in a rating scale can have on responses, a standardised approach of sequencing all items in alphabetical order⁵⁶ was employed throughout the questionnaire.

Knight (2002) pointed out that in highly structured inquiries “respondents only get to talk about the things that the researcher thinks are important and there is no scope for them to talk about other things that may be far more significant for them” (*ibid*: 51). “Not only do highly structured instruments lock respondents into the researcher’s theory of what matters, but the fixed-response questions reduce their ability to convey the complexity of experience, perceptions or feelings” (*ibid*: 52). In addressing this limitation, in this survey, sections for additional comments were provided following fixed-response questions. The request for additional comments provided space for the expression of views and hence reduces the inhibiting effects of the highly structured inquiry that Knight pointed out. As such voluntarily provided additional comments strengthen quantitative data, in the results and discussion section of this chapter these are listed in the form of verbatim quotes following presentations of quantitative findings. It is worth noting here that some respondents in this survey wrote their comments in response to some questions when the available answer options did not reflect their views. Respondents’ refusal to select answers when it did not truly reflect their views, added further strength of the quantitative data presented in this study.

A combination of in-depth interviews and email questionnaires were used to gain perspectives from media managers. For the same reasons of avoiding the disadvantages of highly structured questions, some questions addressed to media managers, were adapted to an open-ended format. These included, questions relating to concerns and criticisms expressed in literature, and media receptiveness towards a more responsible role in communicating sustainability. In the results and discussion of this chapter, summaries of key findings and themes derived from a qualitative analysis of their responses together with the number of respondents involved (in percentages) are provided followed by lists of verbatim quotes that illustrate the key observations.

With the exception of sections solely applicable to journalists (such as rounds covered and background details), and those exclusively relevant to media managers (such as organisational policies), questions posed were largely similar for both groups. In instances where a comparative statistical analysis between the groups was considered necessary, questions were retained in a structured format and identical for both groups. The final research instruments used are provided in Appendices 10 and 11.

⁵⁶ Previous studies that employed the alphabetical order method for items in fixed response questions include: Hejmadi, A., Davidson, R.J. and Rozin, P. (2000) Exploring Hindu Indian Emotion Expressions: Evidence for Accurate Recognition by Americans and Indians. *Psychological Science* 11(3),183–187; Bellezza, F.S., Greenwald, A.G. and Banaji, M.R. (1986) Words high and low in pleasantness as rated by male and female college students. *Behavior Research Methods, Instruments, & Computers* 18(3), 299-303.

A particular problem encountered in the development of the research instrument was devising a structured question to measure understanding of sustainability. In addition to measuring journalists' understanding of the terms 'sustainable development' and 'sustainable consumption' based on their responses to open-ended questions, it was reasoned that a fixed-response question would provide an additional measurement of depth of understanding, while providing the advantage of immediate (statistically analysable) quantitative data. To test perceptions about relevance of sustainability to different areas, a list of thirty likely topics with direct or indirect relevance to sustainability was developed:

Animal ethics	Entertainment	Manufacturing
Agriculture	Environment	Politics
Business	Engineering	Poverty
Culture	Human rights	Science
Conservation	Human health	Shopping
Development	Intergenerational equality	Social wellbeing
Ecology	Intergenerational equality	Sports
Economy	International relations	Technology
Education	International trade	Tourism
Energy	Lifestyle	Trade

The tentative hypothesis was that the more the number of topics indicated as having relevance to sustainability, the greater the depth of understanding. To test the reliability of the question as a measurement tool for understanding of sustainability, a pilot-test was conducted with advocates and proponents of sustainability. The question was posted on the *Fostering Sustainable Behaviour Listserv*⁵⁷ and emailed to individual members of *Sustainable Otago Christchurch*⁵⁸ and a staff member of *Landcare Research*⁵⁹, Christchurch. Thirty-two responses were received, of which, only 47% agreed that all thirty topics in the list had relevance to sustainability. Some of the comments they provided include:

Indeed, all of these aspects seem to be related to sustainability. Goes to show how it affects all aspects of life and thus how important it is to think and act sustainably.

In my understanding of sustainability it is not "if" some area has relevance to sustainability – all have!

I would say that they all relate to sustainability...The better question for me is – what does not relate to sustainability? Is there anything?!

A more relevant or at least interesting question may be to ask if there are any 'areas' at all that have no relevance or connection to sustainability.

⁵⁷ The *Fostering Sustainable Behavior* listserv, initiated by environmental psychologist, Doug McKenzie-Mohr, connects sustainability planners from around the world, providing a domain for discussion and dialogue on sustainable behaviour initiatives. The posted question and some of the responses are viewable at the Community-based Social Marketing website: www.cbsm.com, under the topic "Consumption" in its Listserv Archive.

⁵⁸ *Sustainable Otago Christchurch* is a Christchurch-based, not-for-profit incorporated membership society that aims to contribute towards the long term sustainability of Christchurch. See the society's webpage at www.sustainablechristchurch.org.nz for further details.

⁵⁹ *Landcare Research* is an environmental research organisation in New Zealand with a focus on the sustainable management of land resources. See www.landcareresearch.co.nz for further information.

Although one respondent agreed of the relevance of sustainability to all topics, he pointed out the complexity of the relationships within. He said:

All those things may be related to sustainability but they are related in different ways. For example, I would say some are more crucial to fostering and developing sustainable practices than others. I would also say that some may be complexly related to sustainability, in some cases as potential enhancers of sustainable practices, and in other cases as potential barriers to sustainable practice. Finally, some of the items such as poverty might be seen as outcomes of sustainable (or non-sustainable depending on one's perspective) practices, as well as factors to consider when trying to implement sustainable practices.

Others, on the other hand, questioned the relevance of some topics such as animal ethics, sports and entertainment to sustainability. For instance, in one case, a US-based sustainability planner commented: "The only 'no' I have is animal ethics. I do not necessarily hold the treatment of animals to the same regard I do treatment of humans."

This finding adds evidence to what many have previously observed – sustainability means different things to different people. As Harris (2004c: 267) put it:

During the 1980s and 1990s sustainable development was the buzzword to be used wherever needed; by environmentalists, politicians and economists; in the media, in speeches and in international agreements. However, it does not always sound as if they are talking about the same thing. This is because each group has refined its own definition of sustainable development, with the result that what deep green environmentalists mean by sustainable development is not the same as what economists mean.

Because the pilot-test results in this study affirmed that sustainability advocates were not consistent in their perceptions about topics of relevance to sustainability, the question was restructured and related instead to journalistic rounds⁶⁰ that New Zealand journalists would be more familiar with. This question therefore allowed an evaluation of the degree to which journalists saw the relevance of reporting rounds to sustainability.

The lack of consensus about what sustainability means among its advocates points to difficulties in designing structured evaluative instruments since there are no definite standards to base on or compare with. Alternatively, open ended questions, the method used in this survey (and in the case studies presented in Chapters 4 and 6 of this thesis) provides the possibility of evaluating depth of understanding to some degree, by numerical counts of the number of valid keywords used to express understanding. In this case study, as it was a measurement of pre-existing understanding rather than an evaluation of impacts of an awareness raising intervention, keywords identified to quantify understanding of 'sustainable development' were based on the widely accepted WCED (1987: 43) definition i.e. "development that meets the needs of the present generation without compromising the ability of future generations to meet their needs" and keywords for 'sustainable consumption' were based on the regionally established OECD definition, i.e. the "use of services

⁶⁰ Tucker (1992: 72) referred to the system of rounds in New Zealand as "...the specialisation by a reporter in a particular field". This is similar to journalistic "beats" as it is termed in American and Canadian states and "journalistic specialisms" as referred to by Harrabin (2000).

and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life-cycle of the service or product so as not to jeopardise the needs of future generations” (OECD 2002: 9). As stated in the preceding chapter, this keyword system of measurement is a new method designed for the purpose of the case studies in this research. Its use and testing in other contexts to measure understanding of sustainability is recommended to further validate the reliability of this method as a measurement instrument.

Drafts of the questionnaire for reporters were pre-tested with one working and two former reporters⁶¹. In addition, Dr Richard Knaub⁶² (who participated in the pilot-test described above) reviewed the questionnaire and provided suggestions for statistical analysis. As it was not feasible to locate pre-test participants for the media manager category, pre-test interviews were conducted with Dr. Muhammed Musa and Dr. Donald Matheson, academics of University of Canterbury’s School of Political Science and Communication.

5.3.3 Method of administration

Considering its advantage, this study employed the ‘embedded e-mail survey’ method in administering the research instrument. In a comparative study of two forms of e-mail surveys, ‘embedded’ within an email and ‘attached’ to an email, Dommeyer and Moriarty (2000: 48) found that the ‘embedded’ questionnaire received a higher response rate since it “requires little technical sophistication, and respondents may proceed simply by replying to the email”. The attached questionnaire, on the other hand, poses a variety of obstacles to the prospective respondent. For instance, to respond the individual would need to have “the hardware and software that will enable him/her to download, read and upload a foreign file, the knowledge of how to execute the various response steps and a low fear of computer viruses. Failure to have any one of these factors could result in a non-response” (*ibid*: 48).

Bryman (2004) suggested that online research instruments may be categorised as either structured interviews or self-completion questionnaires, and that in a way they fall under both categories. In this study, the research instrument resembled a structured interview in that, errors in responses and unclear comments were followed up with an email and / or a phone call seeking clarifications. Phone conversations were hand written and typed immediately after. Transcripts of phone interviews were sent back to respondents by email for their verifications.

⁶¹ Ms Kamala Hayman (a health reporter of The Press in Christchurch), Mr Rhys Taylor, (a former local newspaper journalist and magazine editor from the UK) and the late Mr Nick Early (a former environment reporter of a New Zealand daily newspaper).

⁶² Dr. Richard Knaub was the founding Director at Daemen College’s Center for Sustainable Communities and Civic Engagement. He presently works for the City Council in Boulder, Colorado on its Community Sustainability strategic plan.

Curasi (2001) found that although computer-mediated interviews lacked the advantages offered by the presence of an interviewer (e.g. rapport between interviewer and respondent; non-verbal communication; and, probing), informants in the computer-mediated interviews do respond to follow-up questions posed. The disadvantage she detected was that such follow-up questions can lengthen the time required to complete the interview. In addition, the computer-mediated interview required a greater degree of “informant commitment or motivation...since participants are required to exert more effort to complete an online interview” (*ibid*: 369). Since respondents are able to edit their answers, responses generated through computer-mediated interviews are likely to be expressed in well-formed sentences and more thought out (*ibid*.). On the other hand, this may mean more cautious responses – which in turn could be interpreted as containing a social desirability bias (*ibid*.). Although the possibility of “edited” answers, as observed by Curasi, was acknowledged in the case of this study, these were limited to responses provided to open-ended questions and the additional comments that journalists provided.

5.3.4 Recruitment process and response rates

Media managers from twenty-seven mainstream print media organisations and three broadcast media organisations were contacted via email, and in most cases followed up with a telephone call, between 3 and 29 June 2006 to gain their consent for the environment reporter (or a reporter who frequently covers environmental or sustainability issues) in their organisation to participate in a survey. A brief explanation of research objectives was provided. In cases, where the name of such a reporter was not known, the media manager was asked to identify one. Four of the twenty-seven print media organisations declined participation; two explained that they did not have a reporter covering such a topic in their organisation. Two of the three broadcast media contacted declined, indicating that environmental issues were not assigned to any one specific reporter. To some extent, this observation was comparable to a study of environment reporters in the United States, by Sachsman *et al.* (2006: 98) that found that “newspapers were far more likely than television stations to have a reporter covering the environment on a regular basis.”

A list of twenty-four reporters who either covered the environment or a related round was established. The reporters were subsequently sent Part 1 of the questionnaire together with a letter of invitation that provided the research objectives and indicated that prior permission had been obtained from their editors / news directors, for their participation in the research. Part 2 of the questionnaire was sent upon receipt of answers and clarifications to Part 1.

Curasi (2001) found that contacting potential respondents via telephone or in person helps increase response rates in online research, and helps prevent the possibility of the email-survey being assumed to be spam mail. In this survey, non-responses were followed up with telephone calls two

to three days after invitations were sent. Twenty-two reporters responded, yielding a response rate of 92%. Twenty-one complete both parts, while one completed Part 1 of the survey.

Individuals in decision-making positions of three print media organisations and three broadcast organisations were sent invitations for interviews on 4 June 2006. Non-responses were followed up with phone calls. A response rate of 67% was achieved. In-depth interviews were conducted with two media managers from the print media, on 3 and 11 July 2006, and with another two from broadcast media, on 3 and 4 July 2006.

To increase the number of media managers participating in the research, another twenty-four print media editors and managers were contacted via email, between 19 and 26 July 2006, to invite their participation in an email survey. Non-responses were followed up with one follow up email and a subsequent phone call. Questions used in the survey were identical to the interview questions. Eight responded yielding a response rate of 33%.

In addition, this study attempted to find out if newsperson's judgement about what makes a sustainability issue newsworthy differed from judgements made by *proponents* of sustainability. To make this comparison, a *purposive sample*⁶³ of thirty-eight sustainability advocates and proponents of a variety of backgrounds within New Zealand were recruited between 28 February and 15 March 2007. An email inviting participation (see Appendix 12) was circulated through the *Sustainable Otautahi Christchurch* members list, and other contacts of the researcher who work in areas related to sustainability. With voluntary help from Mr. Tony Moore (Principal Advisor for Sustainability Strategy and Planning) of the Christchurch City Council (CCC), the invitation was further circulated, to staff members of the CCC working in various areas of sustainability.

5.3.5 Statistical analysis and representativeness of samples

Measurement scales used in this study were ordinal; hence statistical analyses were performed using non-parametric statistics.

The number of reporters represented in this study was high relative to population size; therefore, resultant data is likely to be representative of the population under study. However, considering the smaller number of media managers participating in the research, the sample of media managers was regarded as non-representative. For both groups, there was a lack of broadcast media representation, reducing sample representativeness.

⁶³ Purposive sampling is a non-probability sampling method based on the researcher's judgement of respondents' suitability for the purpose of the research (Robson 2002). See Chapter 6 (Section 6.3.12) for a more detailed discussion on purposive sampling.

Another factor that may have further reduced the representative strength of the media managers sample in this study was the possibility of non-response bias. Out of eighteen who did not respond, three indicated a lack of time as their reason for declining participation. Two others expressed that they were not familiar with the topic of the research, and that they would not be able to offer useful information or insights. Five declined participation without providing any reasons, while eight simply did not respond. As was also the case in Maloney and Slovonsky's (1971) survey, it was not feasible to appraise the non-response bias in this study. In pointing out a possible reason, Maloney and Slovonsky wrote:

Editors are busy people and many of them must have regarded our request for help as an unwarranted nuisance. Some who have done little to cover the pollution story may have felt that it would adversely reflect upon themselves to answer the questions. Others probably have little or no interest in press coverage of the pollution story, one way or the other. Thus, editors who did reply probably give us an "over-representation" of those seriously concerned about pollution and interested in its coverage (*ibid*: 68).

Considering the possibility of non-response bias as suggested by Maloney and Slovonsky above, results in this study are to be treated cautiously – as perspectives gained from a non-representative sample of media managers.

5.4 Results and Discussion

5.4.1 Respondents

In total, twenty-two reporters (twenty-one from newspapers and one from a broadcast medium) and twelve media managers (ten from newspapers and two from broadcast media) participated in this survey.

In the reporters' category, sixteen held positions as reporters or journalists; one as senior journalist; and, five as chief reporters. Reporters' years of work experience ranged from one to thirty years, with the majority falling under the 1-5 years category (59%), followed by those with 6-10 years experience (18%), 11-15 years (9%), 16-20 years (5%) and 26-30 years (9%).

Respondents of the media manager category comprised eight editors, an assistant editor, a general manager, and a news and current affairs producer. In one case, due to time constraints, an editor assigned a senior journalist to respond on her behalf. In a follow up phone conversation, the journalist assured the researcher that her views are unlikely to differ from those of her editors' as they worked very closely together.

5.4.2 Priority given to sustainability issues

As detailed in Chapter 2 of this thesis, some have contended that the media in general give little priority to S&E stories (e.g. Bowman and Hanaford 1977; Freedman 2004; Jackson 1991; Parker

2003b; Shanahan and McComas 1997; Spellerberg *et al.* 2006; Valenti and Crage 2003; Voisey and Church 2000) and that environmental issues tend to become sidelined when other issues are deemed more newsworthy (e.g. Althoff *et al.* 1973; Alexander 2002; Bocking 2002).

To determine the degree of priority given to sustainability issues by the mainstream media in New Zealand, reporters and media managers in this study were asked to rank the level of importance given to covering these issues within their organisations by choosing from a 5-point rating scale – ‘highest priority’, ‘high priority’, ‘average priority’, ‘low priority’, or, ‘lowest priority’. As demonstrated in Figure 5-1 the majority in both groups indicated an ‘average priority’. A *Mann-Whitney U test*, showed that reporters and media managers did not significantly differ in their ranking ($U=125.000, N_1=22, N_2=12, p=0.817$, two-tailed).

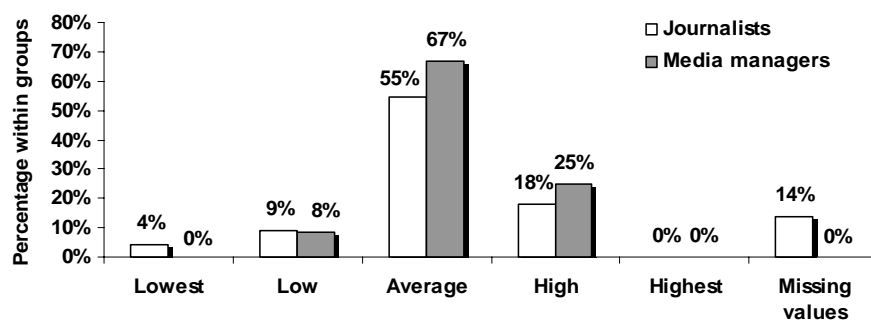


Figure 5-1 Priority given to covering issues related to sustainability, as indicated by reporters and media managers

In explaining why sustainability issues were given an ‘average priority’ within his organisation, one reporter said: “This is because we are a regional newspaper and there is a lack of research and information on what is happening in our region. The research and lobby groups look at issues – and produce relevant research – on the national and global level, but not the local.” In a follow up phone interview, he clarified his reference to research groups:

Universities can be in that category, but also government funded research and research done by lobby groups like the WWF and UN. Research is usually on a global scale. I can’t write about it from a global perspective. We are a local paper and we need to write our story with a local angle.

The above response indicates an emphasis on the news value of ‘meaningfulness’ which emphasises proximity and relevance of the news item to its audience – one of twelve news value determinants that Galtung and Ruge (1965) identified. Further evidencing this news value, other reporters who indicated an ‘average priority’ provided the following comments in support of their position that the news media attempts to provide stories that are of ‘interest’ to the public:

Our job is to report what is interesting to the public, not to tell the public what should be interesting to them.

News reflects many aspects of society. To be utterly frank, the biggest sellers of newspapers is sports news, if we painted a picture of sustainability doom and gloom we wouldn’t sell papers.

We are always trying to make things relevant – if set nets mean dead dolphins on our beaches, it easily makes page one. But even global warming can be a bit too far away. Might never happen for some readers.

A reporter who indicated that sustainability issues were given ‘lowest priority’ explained:

[Name of organisation omitted] seems to me a difficult place in which to get stories about sustainability and wider environmental issues to print. I’m not sure why this is. Perhaps the fact that most of the senior editors drive SUVs has something to do with it. Also, I think it would be fair to say I don’t try as hard as I could to get the issues into a shape that resembles something that is both new and exciting. I would be interested to know how other journalists got on getting stories about climate change etc into their papers.

One reporter did not select an answer for this question. She commented instead that it depended on the newsworthiness of a story. In a follow up phone interview she explained: “I don’t think you can say that something is high or low priority, everything is gauged based on its newsworthiness. For example a flood was a major issue that was treated as highly newsworthy.” Similarly, another reporter who declined selecting an answer remarked: “A story takes its place alongside other news events of the day – a lead story one day might be overtaken by bigger stories the next day. We don’t push any particular causes.” This comment adds evidence to Galtung and Ruge’s (1965: 67) hypothesis on – “composition” – that the news media attempts to present a variety of news items as a “balanced whole.” In the case of environmental news coverage, Anderson (1997: 119) observes that this means that “whether or not a particular news story is selected is to some extent dependent upon the distribution and character of competing news items”.

To some degree, the above findings are in concurrence with the observation by Althoff *et al.* (1973) that media managers tend to judge environmental issues as relatively less newsworthy in comparison to other stories, and observations made by Alexander (2002) and Bocking (2002) that environmental issues may be neglected when other issues are rated to be more newsworthy. However, the general ‘average priority’ given to sustainability issues may not be solely a result of the journalistic judgement process of newsworthiness. As one respondent pointed out in this study – the lack of editorial interest and difficulty in framing sustainability stories as “new and exciting” may also contribute to the lack of priority given to sustainability issues in the media.

5.4.3 Specialisation in environment journalism

Keating (1994) observes that sustainable development frequently falls within the domain of the environment beat. Sustainable development is generally regarded as an environmental story because it came forth from that field (*ibid.*). Likewise, Voisey and Church (1999: 8) observed that there is still a conviction among newsmen that “sustainable development equals environment.” Since “sustainable development came onto the agenda through the 1992 Earth Summit” it tends to be perceived “mainly as an environmental issue” and hence most sustainability stories “originate at the environment desk” (Voisey and Church 2000: 199).

Based on the above observations, in this study, specialisation in environment journalism among reporters was assumed to be an indication that some degree of priority was given to sustainability issues. However, in response to the open-ended question – What is your job title? – only one reporter indicated being a “reporter covering rounds of the environment, conservation and regional council.” Two specified their job titles as “rural reporters,” while all others provided generic job titles such as general reporter, reporter, journalist or chief reporter. Sachsman *et al.* (2006) observed a similar trend among reporters in the United States. They found that only “a minority of the journalists in all four regions [of their analysis] were called ‘environment reporters’ or ‘environment writers’ in their own newsrooms” (*ibid*: 99). Instead most “had official titles such as general-assignment reporter, staff writer, or simply reporter” (*ibid*: 100).

From a list of twenty-one rounds, respondents in this study were asked to indicate those that they covered. Figure 5-2 provides the number of reporters covering each rounds category.

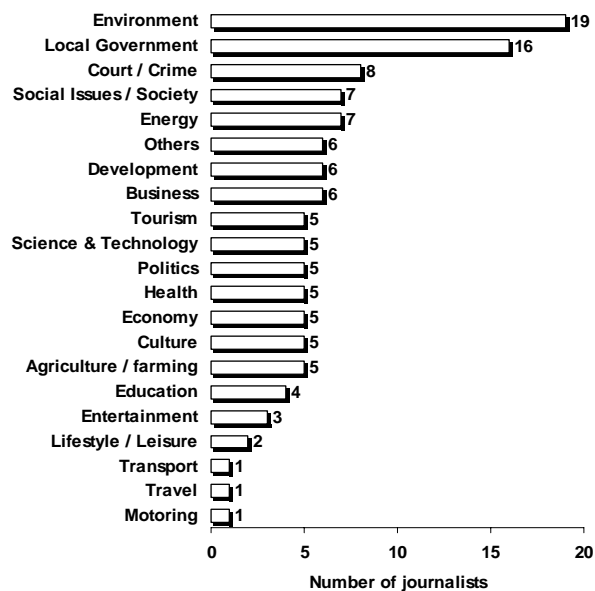


Figure 5-2 Various categories of rounds covered by reporters

The environment and local government appeared to be the most frequently covered rounds. However, this was not taken to be an accurate indicator of specialisation in environmental reporting, as these reporters also had the responsibility of covering various other rounds. Only one respondent noted the environment as the only round she covered. As shown in Table 5-1 all others covered several rounds, ranging from two to ten different rounds.

Table 5-1 Total number of rounds covered by reporters

Number of rounds covered	Number of reporters (Frequency)	Percentage within group (%)
One	1	4.5
Two	1	4.5
Three	5	22.7
Four	4	18.2
Five	1	4.5
Seven	3	13.6
Eight	3	13.6
Nine	3	13.6
Ten	1	4.5
Total	22	100.0

One reporter indicated that she covered two rounds – “environment” and “science and technology”; however, she added: “And whatever else I am asked to, depending on the day and what comes in to the newsroom.” Many others provided similar comments giving evidence to the generalised nature of their reporting:

I do many areas here – regional council, sometimes social issues, sometimes entertainment/food, even motoring on one occasion. There is a smattering of all things on a regional daily paper, but agriculture/farming and agribusiness are my main areas.

In a small newsroom you pretty much end up covering all the rounds at one point.

We are a small newspaper so I do a lot of general stuff, which could come into any of the above.

General, which could include any of the above, except court/crime, motoring and health which are specialist. There are only seven reporters and so there are a limited number of specific rounds because we are a small newspaper. Agriculture and farming is my main area however.

In a small newsroom you are often asked to write on anything and I’ve covered most rounds at some stage.

Over the years, most, which is probably why I was asked to fill in this questionnaire.

As a general reporter I cover stories across the board, but have the indicated rounds allocated to me.

In the case of the above reporters’ counterparts in America, Sachsman *et al.* (2006: 99) found that even though “46.9 percent of the newspapers and 13.0 percent of the television stations studied had reporters covering the environment on a regular basis, these percentages mask the fact that many of these reporters must also juggle other duties.” The authors reasoned that the fact that “these reporters often had duties that go far beyond covering the environment” could be the reason for their varied job titles (*ibid*: 100).

Media managers, in this study, were asked to indicate the number of reporters covering S&E issues within their organisation. Two indicated that they had one reporter within their organisation

covering related issues while five indicated that there were several reporters (between two and four) covering such issues. Four indicated that they did not have a specific reporter dedicated to covering the environment, and that related issues may be covered by any one reporter.

In addition, as Figure 5-3 shows, a majority (86%) indicated that in a month they spent a quarter of their time or less in reporting issues related to sustainability. This further substantiated that these reporters were not full-time environment reporters devoted to covering S&E issues alone.

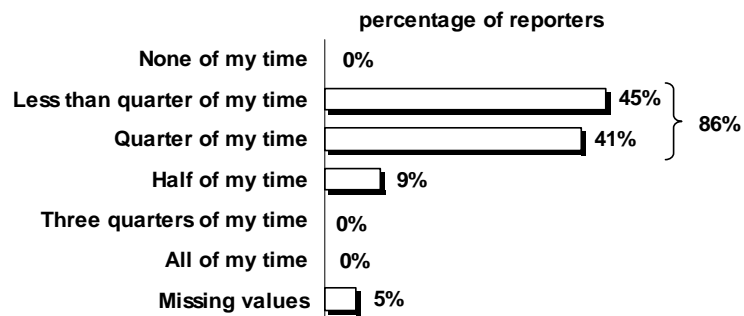


Figure 5-3 Proportion of time reporters spend reporting issues related to sustainability in a month

Based on these findings, it was established that specialisation in environmental or sustainability issues reporting may not be prominent in New Zealand mainstream media although the ‘environment round’ as such may exist to some degree. This may be a cause for concern, as a lack of a full-time role as environment reporters may mean that these reporters would not have the advantage of time to build on their knowledge. In an earlier study of reporters’ knowledge about climate change, Wilson (2000) found that reporters who worked as full-time environment reporters, and frequently used scientists as information sources had the most accurate knowledge about climate change.

There appears to be various reasons for the lack of interest in elevating environment journalism as a specialised field. The employment of a specialised environment reporter is sometimes seen as indicative of a medium’s degree of priority towards environmental issues. For instance, Griffin *et al.* (1995) suggested that when a media organisation assigns an environment reporter it tends to indicate that the organisation has a serious commitment to covering related news topics. Musukuma (2002: 17) observed that although the media in Zambia do provide some coverage of environmental issues, none of the media organisations there have “an environmental desk, thereby indicating that environmental issues do not take centre stage in the Zambian media newsrooms.” Conversely, Rubin and Sachs (1973) suggested that the lack of a specialised environment reporter may reflect the medium’s philosophy about specialisation rather than a lack of commitment to environmental issues. In their survey of environment reporters in Bay Area, California, they observed that news organisations that did not employ a specialist environmental reporter indicated that there was not a need for one – either because there wasn’t sufficient local stories to justify the

need for one, or because the stories could be handled by general assignment reporters. Many in their survey also indicated that they could not afford one. Patel (2006: 149) observed that committed environment reporters were “luxuries that few publications, even in the United States, can afford.” The responsibility of covering environmental issues is therefore often assigned to reporters on other beats such as business, communities or politics (*ibid.*). Likewise, several reporters in this study indicated that the lack of their specialisation in environmental reporting was due to the limited number of reporters that their media organisations were able employ, which in turn points to resource constraint problems of media organisations.

Whatever the case may be, the existence (or a lack thereof) of a full-time reporter covering the environment round may have implications in terms of coverage provided to S&E issues within a media organisation. Tucker (1992: 72) noted that the system of rounds “is essential to New Zealand media because the country does not have an abundance of hard news.” The majority of news, he says, “has to be generated, dug up” or “uncovered” by “roundspeople” who “keep in regular touch with people involved in the round area” (*ibid.*: 72). He further explained that the rounds system was “a good way to focus a reporter’s work, giving him or her a strong sense of purpose. It enables the reporter to become an authority on a particular subject and cultivate the experts and brokers within that field, thus leading to better informed journalism” (*ibid.*: 72). A lack of reporters covering the environment round on a full-time basis, as this study reveals, may mean that reporters are unlikely to develop substantial expertise in this area.

5.4.4 Reporters’ training and education background

To find out about their training and education backgrounds, reporters were asked if they had undergone any prior training in sustainability issues, science, or environmental reporting, and if their formal journalism education had included a subject or module in environmental reporting.

As specified in Table 5-2, almost all (91%) indicated that they had not undergone any related training. Only two (9%) indicated having undergone a seminar on environmental reporting organised by the *New Zealand Journalists Training Organisation* (NZJTO) that had included genetic engineering as a topic and aspects of New Zealand’s *Resource Management Act*, approximately two years prior to this survey.

Table 5-2 Reporters' prior exposure to environmental or sustainability related education or training

Prior exposure to related education or training	Number of reporters	Percentage within group
NZJTO seminar in environmental reporting	2	9%
No training	20	91%
Formal journalism education included environmental reporting	1	5%
Formal journalism education did not include environmental reporting	20	91%
No formal journalism education	1	5%
Other qualifications:		
Science degree	3	14%
Underwent science related subjects (undergraduate degree)	2	9%

Only one reporter indicated that her formal journalism education had included “reporting environmental matters.” Almost all (91%) indicated that their education in journalism had not included such a subject or module. One had not undergone formal education in journalism. She said: “I don’t have any formal qualifications – I came through the old cadetship system, where you learned the trade as an apprentice for several years.” Five reporters, however, indicated that they had acquired related knowledge through other qualifications, three of whom indicated having science related degrees, while the other two indicated having undergone science related subjects in their undergraduate studies that were of some use to their present work.

The above findings were in line with previous accounts (e.g. Friedman 1983; Dennis 1991; and, Archibald 1999) indicating that journalists reporting S&E issues often lack the related scientific background and training.

5.4.5 Reporters' understanding of sustainability

To estimate the depth of their understanding of sustainability, reporters were asked to provide their understanding of the terms ‘sustainable development’ and ‘sustainable consumption’ in their own words. Degree of understanding was ranked based on the number of keywords (which resembled the WCED definition of ‘sustainable development’ and the OECD definition for ‘sustainable consumption’) they used in their definitions. Results are provided in Tables 5-3 and 5-4.

Table 5-3 Number of keywords reporters used to define ‘sustainable development’

Number of keywords used	Number of reporters	Percentage within group
One keyword	15	68%
Two keywords	6	27%
Four keywords	1	5%

Table 5-4 Number of keywords reporters used to define ‘sustainable consumption’

Number of keywords used	Number of reporters	Percentage within group
No definition	2	9%
One keyword	10	45%
Two keywords	6	27%
Three keywords	2	9%
Four keywords	2	9%

In providing their understanding of sustainable development, a majority (68%) were able to provide an explanation that consisted of one keyword. A qualitative examination of responses showed that reporters provided somewhat simplistic definitions of sustainable development. Most reporters simply defined sustainable development as either development that does not impact on the environment or one that does not deplete natural resources. In some cases, as the following citations illustrate, definitions provided were somewhat slanted, as sustainable development was perceived to be a type of economic development:

Economic development that doesn’t rely on non-renewable fuels such as oil and coal, and does not destroy or use up the environment.

Economic growth which can continue without the environment suffering.

Development, generally economic, that does not affect the ability of the environment to continue to produce consumable goods and that does not degrade the environment and its cycling processes.

Eight (36%) reporters indicated that they had never heard of the term ‘sustainable consumption’. While two were not able to provide a definition, others were able to guess what the term meant. As Table 5-4 shows, ten reporters were able to provide definitions that consisted of one keyword while six were able to provide two keywords. In a majority of cases, as the following quotes indicate, definitions were simplistic:

I haven’t heard this term before. I can only assume it’s consumption that doesn’t reduce the opportunities of future generations.

Consumption that does not significantly deplete a resource.

Not consuming more than can be produced.

I have never come across this one before but imagine it means using goods or services in a way that they do not run out and are able to be built up, or grown, again.

Consumption of goods and services that does not use up all resources.

New term to me. Using renewable resources?

Never heard of it before. Not consuming too much?

When asked how they gained their understanding of sustainability, a majority of fifteen reporters (68%) indicated that they gained this through their own efforts to self-educate. Six (27%) indicated

that they learned from other news media, five (23%) that they learned from their experiences in reporting related issues, two (9%) that they learned from government reports, and two (9%) that they gained their understanding from formal education. Three (14%) added that they had a personal interest in the topic.

Although it was anticipated that the number of years of work experience would have a bearing on the level of understanding of sustainability, *Spearman's Rho Correlation* tests showed no significant correlations between years of experience and understanding of 'sustainable development' ($\rho=-0.262, N=22, p=0.238$, two-tailed), nor between years of experience and understanding of 'sustainable consumption' ($\rho=-0.193, N=22, p=0.389$, two-tailed).

It was also anticipated that there would be a corresponding relationship between prior exposure to related education or seminars and depth of understanding of sustainability. Based on findings reported in Table 5-2, the eight reporters who indicated some form of prior exposure to related education or seminar were lumped together as a group in comparison with the fourteen others without any such prior exposure. However, *Mann-Whitney U tests* that compared the two groups found that they did not significantly differ in their depth of understanding of 'sustainable development' ($U=49.000, N_1=14, N_2=8, p=0.718$, two-tailed) or 'sustainable consumption' ($U=36.000, N_1=14, N_2=8, p=0.162$, two-tailed). However, these results need to be treated with caution as they do not represent any specific training or educational initiative.

5.4.6 Perceived relevance of sustainability to reporting rounds among newspersons

The concept of sustainability is one that may be relevant to a variety of reporting topics (Harrabin 2000; Voisey and Church 2000; Keating 1994). Even a seemingly unrelated area such as entertainment has implications for sustainability when examined at a deeper level. However, Harrabin (2000) observes that the multidimensional aspect of sustainability tends not to be reflected in news because of the structure of the news organisation that is segregated into different journalistic specialisations. In this survey, to find out the newspersons' view about relevance of sustainability to the various reporting rounds, reporters and media managers were provided a list of twenty-one reporting rounds and asked to indicate their view about the degree of relevance of each round to sustainability using a 3-point rating scale – 'high relevance', 'moderate relevance' or 'no relevance'. Results are presented in Figure 5-4.

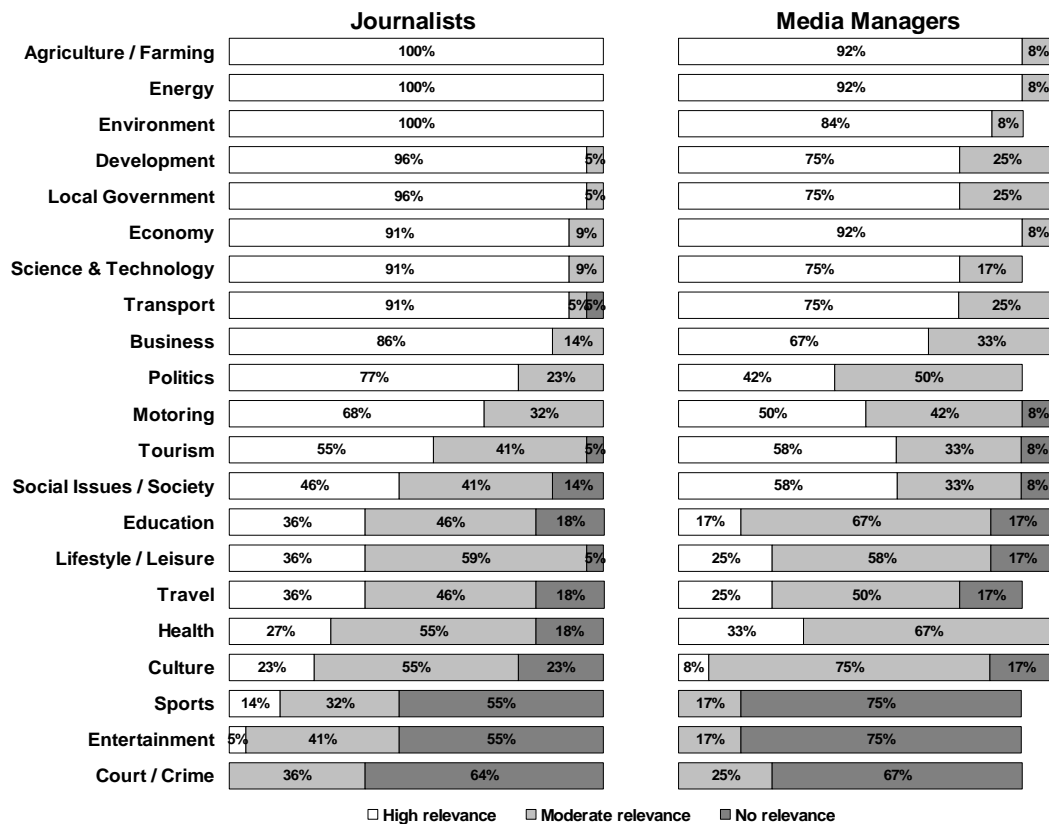


Figure 5-4 Perception of reporters and media managers about the relevance of various reporting rounds to sustainability

A *Mann-Whitney U test* showed a minor, but statistically non-significant difference ($U=63.000, N_1=22, N_2=10, p=0.055$, two-tailed) between reporters and media managers in the total scores for the degree of relevance of sustainability attributed to the twenty-one rounds. In comparison, reporters had a higher mean rank (18.64) than media managers (11.80) indicating that their perception of rounds' relevance to sustainability was slightly higher. A possible reason for this could be that reporters may have more background knowledge about sustainability as a result of hands-on experiences in the issues they report on.

Although reporters' definition of sustainability, as described in Section 5.4.5, were suggestive of a lack of depth in understanding, the findings here suggest that many were aware of the multidimensional nature of sustainability. For example, in clarifying their understanding, four reporters provided the following comments:

Really, almost any subject can be related to sustainability, as there are so many stakeholders within each community, whether it be district, regional or national, which have links to the environment.

Nearly all of the above have some bearing on some aspect of sustainability; whether it is the sustainability of ecological systems or social systems.

It encompasses all as the environment is where we live.

Most aspects of our lifestyle impact on sustainability and the environment. Everything is interrelated.

Even so, as shown in Table 5-5, media managers and reporters showed a high level of variance (S^2) in terms of their perception of rounds relevance to sustainability, with the exception of the agriculture, economy, energy, and environment rounds where there was a lesser level of variance. In a slightly different context, this was in line with Goodell and Sandman's (1973: 44) observations that environment reporters in the U.S. had a varying range of definitions in terms of what they regarded to be an environmental story.

Table 5-5 Mean, standard deviations and variance in rounds' relevance to sustainability as indicated by reporters and media managers

Reporting Rounds	Mean	Standard Deviation	Variance (S^2)
Agriculture / Farming	2.97	.171	.029
Business	2.79	.410	.168
Court / Crime	1.33	.479	.229
Culture	1.97	.627	.393
Development	2.88	.327	.107
Economy	2.91	.288	.083
Education	2.12	.686	.471
Energy	2.97	.171	.029
Entertainment	1.39	.556	.309
Environment	2.97	.174	.030
Health	2.18	.626	.392
Lifestyle / Leisure	2.24	.606	.367
Local Government	2.88	.327	.107
Motoring	2.59	.557	.310
Politics	2.67	.479	.229
Science and Technology	2.88	.331	.110
Social Issues / Society	2.38	.697	.486
Sports	1.45	.666	.443
Tourism	2.50	.615	.379
Travel	2.15	.712	.508
Transport	2.82	.459	.210

5.4.7 Problems reporters face in reporting sustainability

To find out problems reporters face when reporting issues related to sustainability, they were asked to identify from a list of ten problems, those that they personally faced. Media managers were provided an identical list and asked to identify those that they believed reporters faced. Figure 5-5 illustrates their responses. *Pearson Chi-square Tests* showed that there were no significant differences ($p>0.05$) between reporters and media managers, for all problems indicated.

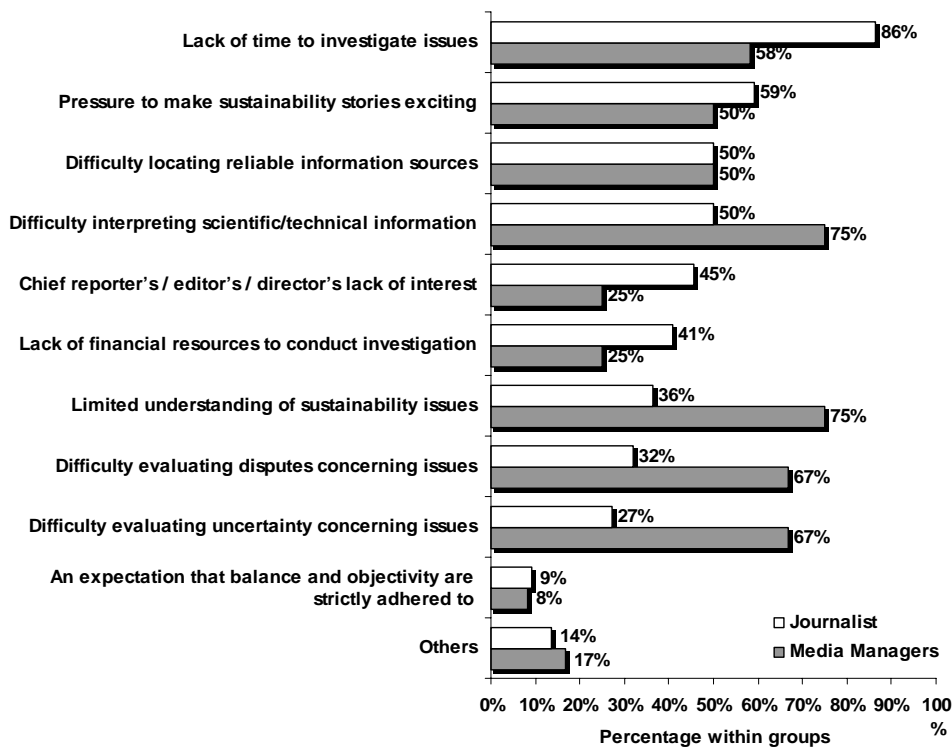


Figure 5-5 Problems as experienced by reporters, and as perceived by media managers

For reporters in this study, lack of time to investigate and pressure to make the stories exciting were the most frequently cited problems. Some reporters indicated other problems they faced in addition to the problems listed in the questionnaire. One indicated that his organisation allowed only limited use of the internet. Another said: “Sustainability is a long-term, ongoing issue and as such I find it difficult to get a news angle from it. Also, it can be difficult to get academics who speak on the issue in such a way [that] readers can relate to it.” She also emphasised that she greatly agreed that “pressure to make sustainability stories exciting” was a problem. In a follow up email she explained: “It’s not that they must be ‘exciting’ as such but to give a long term issue timely relevance it must have an immediate angle.” This remark was indicative of a need for journalists to frame sustainability stories in accord with the news media’s “frequency”, as suggested by Galtung and Ruge (1965), which often limits news production within a twenty-four hour cycle (Anderson 1997).

Another reporter said that an additional problem he faced was “making the stories interesting to the average reader” who might be more interested to know “who won the football game played overnight in Spain”. A chief reporter commented:

I think one of the problems in writing about sustainability is the fact that any problem, say with mining, seem very far away. Even the expressions used are a bit of a turn off for readers. We write for the 12-year-old reader – would they really grasp the expression ‘sustainable consumption’?

In identifying yet another problem, the above respondent said: “The biggest problem is linguistics – the word sustainability itself is boring. The challenge is writing stories that express WHY the topic is important without using technical lingo.” In explaining a problem he faced, another reporter said:

I personally have a lack of contacts in this field. I’d like to get the [newspaper’s name omitted] to run a campaign calling for the fencing of all waterways from stock to allow streamside plants to grow and improve water quality but I have no hope of being able to do so.

By contrast, a chief reporter who did not indicate any of the listed problems said: “I am pleased to say none of the above! An expectation to protect advertisers has been an issue with a few stories over the last three years but these haven’t been related to sustainability issues.” He went on:

I believe our coverage of sustainability issues is already very strong and doesn’t suffer from any of the constraints listed in Q25. I think this strength stems from the fact that: [1] sustainability issues frequently arise in my news rounds (environment / local government / development); [2] as the chief reporter, I drive most of the paper’s lead stories; [3] as a weekly newspaper we tend to be more issues-oriented than news-oriented and many of the hot issues in the [name omitted] region are environmental issues: Coastal development, infrastructure, water quality, local control of GMOs etc.

Although only a small percentage (36%) indicated ‘limited understanding of sustainability issues’ to be a problem they faced, a majority provided only simplistic definitions of sustainability (see Section 5.4.5). Although this was not assumed to be a definite indicator of depth of understanding, considering that an overwhelming majority of over ninety percent did not have formal education or training in a related field (see Section 5.4.4) – it is arguable that these reporters are unlikely to have a deep understanding of the intricacies of sustainability.

Contrary to the views of media critics (as detailed in Section 2.10.12) that balance and objectivity in environment journalism was problematic, only a fraction of reporters (9%) and media managers (8%) in this study noted it to be a problem. This was indicative that objectivity and balance were preserved norms of the journalism profession in New Zealand. Likewise, Yang (2004: 95) observed that American journalists strongly stressed “objectivity and neutrality as their occupational norm. They believe[d that] their personal values do not and should not influence environmental news coverage”. This may be due to, as Yang observes, journalists’ perception “that the production of environmental news is not much different from the production of other daily news items. Accordingly, they consciously or unconsciously rely on conventional news values, story formulas, and source patterns which govern the production of general news stories” (*ibid*: 95).

5.4.8 Constraints to sustainability reporting as observed by the newsperson

To find out existing constraints that have an impact on the quantity and quality of sustainability issues reporting, reporters and media managers were asked to select from a list of ten constraints, those that they observed in their organisation. Results are illustrated in Figure 5-6. *Pearson Chi-*

square Tests showed no significant differences between reporters and media managers ($p>0.05$) for all constraints indicated.

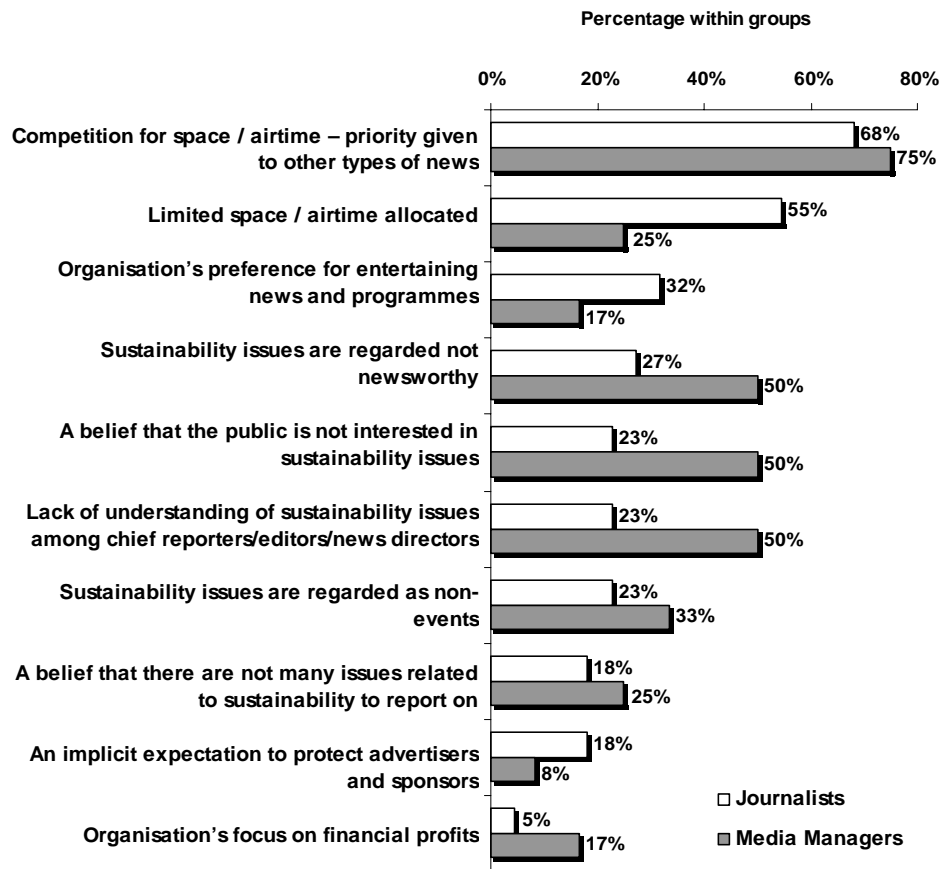


Figure 5-6 Constraints to sustainability reporting observed by reporters and media managers

A majority of both reporters (68%) and media managers (75%) identified ‘competition for space / airtime’ to be a constraint to sustainability issues reporting as this resulted in priority given to other types of news.

Conversely, one reporter provided the opinion that coverage provided to sustainability was adequate within his organisation; he said: “This is as it should be. I wouldn’t want to read a newspaper focussed solely on sustainability issues. Neither are stories put in an ‘environmental therefore boring’ basket. Each potential story is judged on its merits. Do people want to read it?” In a follow up email discussion with the researcher, he added:

It is good that there is competition for space with other news, and it is good that there is a focus on entertainment. So I don’t necessarily regard these as a problem that it impacts on the quantity and quality of sustainability issues reported.

In line with previous observations by Goodell and Sandman (1973), Yang (2004), and, Sachsman *et al.* (2002), this study found that a very small percentage of reporters and media managers

indicated that an implicit expectation to protect advertisers and sponsors to be a factor that affects quantity or quality of sustainability issues reporting. Contrary to observations by media critics, as detailed in Section 2.9, only a small number of newsmen in this study regarded their organisations' profit focus to be a constraint that impacts on sustainability issues reporting. It may hence be the case that the perspective that a medium's commercial interest is an impediment to its coverage of S&E issues is one that is more common among media critics than media personnel themselves. This may be linked to a prevalent belief among newsmen that news is independent of advertising.

5.4.9 Needs of the media in order to improve coverage of sustainability issues

Reporters and media managers were asked to identify the most pressing needs within their organisations in order to improve coverage of sustainability issues. Results are presented in Figure 5-7. There were no statistical difference between reporters and media managers for all but one point⁶⁴. Four reporters did not indicate any of the needs provided in the list; they commented instead:

None of the above. Coverage will increase with time – you are already seeing it with petrol etc. As things get more real – e.g. petrol prices – you will see more stories...

First and foremost it comes down to – is it newsworthy...It will have space if it is deemed by reporters, chief reporters and editing staff as being newsy.

This presumes we have a problem with the coverage of sustainability issues.

[What I need is] an eye for when a sustainability story will be of interest.

For other reporters 'training for reporters' and 'training for editors' were the most pressing needs. This was in line with earlier surveys and observations where environment journalists have indicated training in environmental reporting as essential for their profession (Bruggers 2002; Detjen *et al.* 2000; Lord 2002; Tabakova and Antonov 2002). In a follow up telephone interview with the researcher, one reporter expressed the view that training editors was more important than training reporters; he said: "It seems training reporters is less valuable because it is the editors who are the decision makers." While many reporters perceived training to be an important need, one expressed a differing view. In particular reference to three points⁶⁵ from the provided list – he said:

All of the above, especially 5, 8 and 9, look suspiciously like propaganda, or trying to deliberately shape public opinion. Who would do the training and what would be their angle? Journalistic understanding comes from commonsense, information and experience, not indoctrination. We recognise that newspapers do shape public opinion, but we try not to.

⁶⁴ Compared to reporters (5%) a significantly higher ($p=0.047$, two-sided Fisher's exact test) number of editors (33%) had identified 'networking between reporters covering this field' to be a need.

⁶⁵ The three points he referred to were: (5) Internal policy or code of conduct to include sustainability in content; (8) Training in sustainability issues for editors / chief reporters / directors; and, (9) Training in sustainability issues for reporters

Over half of the reporters in this study also indicated ‘volunteered contributions from reliable information sources’ to be a need for improvements to sustainability issues coverage. One clarified that this was because “there [was] a lack of local information on sustainability issues.” In addition to the needs provided in the questionnaire, another added that what his organisation needed was “established point sources reporters can turn to for rapid fire info, [and] a developed communications industry – sources that are able to provide immediate information.”

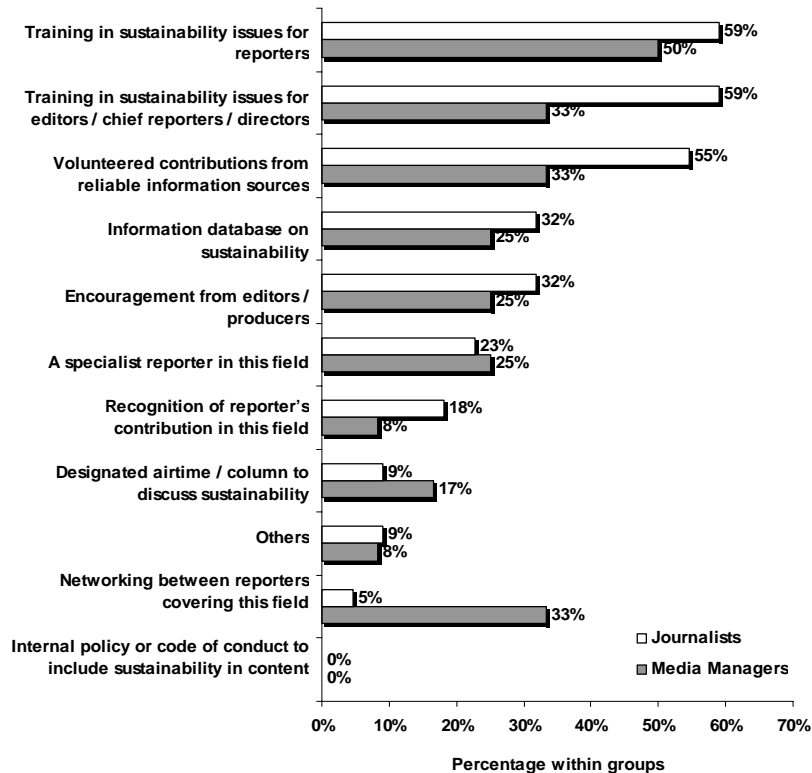


Figure 5-7 Needs of reporters in order to improve coverage of sustainability issues

Other observations in this study were, however, not strongly supportive of previous observations. For instance, although Friedman (1983), Friedman and Friedman (1989), and Keating (1997) have suggested a lack of specialisation in environment journalism to be a constraint to S&E news coverage, only about a quarter of reporters and media managers in this study identified ‘a specialist reporter in this field’ to be a need within their organisation in order to improve coverage. Although recognition of a reporter’s contribution in this field, as suggested by Leal and Borner (2005a) was expected to be factor that could lead to improvements in coverage, only a small percentage of reporters (18%) and media managers (8%) here indicated this to be a need. Archibald (1999), Chapman *et al.* (1997), Friedman and Friedman (1989), Harrabin (2000), Sachsman *et al.* (2006), Sandman (1974), and, Yang (2004) have identified that a major problem environment journalists face is the lack of allocated space for coverage, often resulting from a competition with other news categories. However, as Figure 5-7 illustrates, only nine percent of journalists and seventeen percent of media managers in this study identified ‘designated airtime or column to discuss

sustainability’ to be a need for reporters to achieve improvements to coverage. Although Chait (2002), Michaelis (2001), Porter and Sims (2003), and, Spellerberg *et al.* (2006) have suggested that internal media policies or codes of conduct on S&E issues coverage could lead to improvements in media coverage of these issues, none of the reporters or media managers in this study believed it to be a ‘need’ of the media to improve their coverage. However, these findings are to be treated as tentative, considering that they derived from a structured multiple-choice question. A more detailed enquiry would need to engage newsmen at a deeper level to find out the rationales of their responses.

5.4.10 Information sources used when reporting sustainability

The type of information sources reporters use in S&E reporting is likely to determine the angle of their stories. Nash and Bacon (2006: 109) emphasised the significance of information sources in journalistic reports on sustainability since

sources provide information, bear witness to the truth claims, and authorise interpretation of the significance and meaning of the ‘facts.’ By reporting their truth claims, journalists not only authorise the claims as newsworthy, but...[also] authorise the rights of the claimant to make the claim.

In this research, reporters were provided with a list of ten information sources and asked to indicate the frequency of their use when reporting sustainability issues, by choosing from a 3-point rating scale: ‘never’, ‘sometimes’ or ‘frequently.’

As illustrated in Figure 5-8, the most frequently used information source was ‘environmental interest groups’, followed by ‘government officials’ and the ‘public’. This finding was only marginally in line with previous observations. While others have observed a similar trend of high reliance on government sources, this was not the case for environmental groups. For instance, Goodell and Sandman (1973: 45) found that although environmental reporters relied “heavily on the thoughts and writings of conservationists”, they also observed that there was a tendency among these reporters to disbelieve and disregard the assertions made by conservationists. In their examination of environmental risk coverage by network evening news (ABC, CBS, and NBC), Greenberg *et al.* (1989a: 119) found that while government was the most frequently used information source followed by citizens, experts and spokespersons of “environmental advocacy groups were sparsely used as sources.” In a study of U.S. environment reporters, Sachsman *et al.* (2006: 105) observed that government environmental departments, “local environmental groups, and local citizens active on the environment were among the most used groups.” Greenpeace, however, “was one of the least used sources in all four regions” of their analysis (*ibid*: 105). In a comparison of British and Danish television news coverage of environmental issues, Hansen (1990 *cited in* Hansen 1991: 450) found that environmental groups were primary definers of environmental issues in only six percent of news stories covered, outnumbered by other sources

such as public body or authority figures, government, and scientists. In his examination of the contents of the Baltic press, Gooch (1995) found that while government authorities were the most important information source, environmental groups were not frequently cited as information sources. The heavy reliance on environmental interest groups in this study was also contrary to Yang's (2004) observations of American journalists who were notably unsympathetic to environmental groups. These journalists felt the need "to distance themselves from the environmental activist groups in order to adhere to the principle of neutrality. Some journalists even express[ed] a negative view of environmental groups because they [were] perceived as promoting certain interests" (*ibid*: 98).

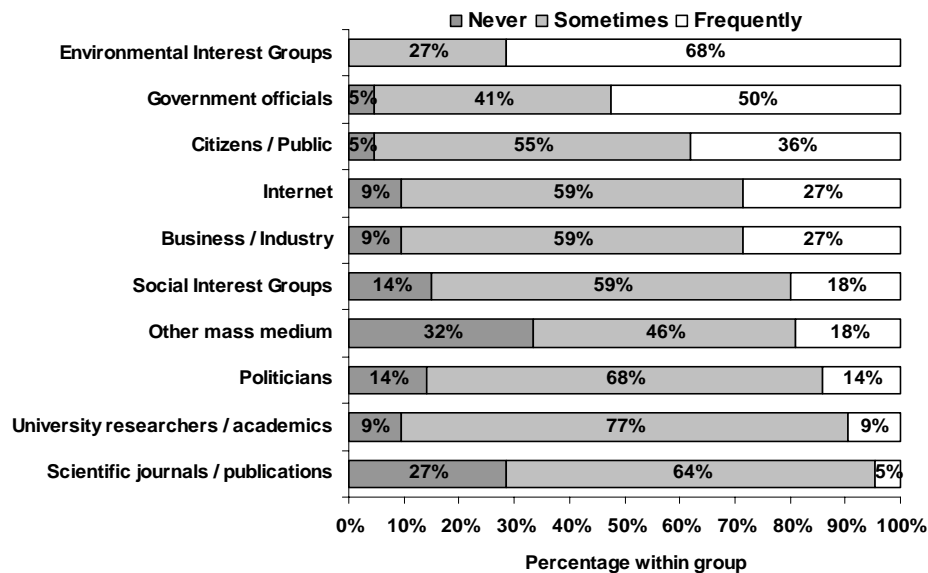


Figure 5-8 Frequency of information sources used by reporters

However, the heavy reliance on government officials as information sources among environment reporters in study was in line with the previous observations cited above. In explaining this reliance, Yang (2004: 98) noted:

...officials and experts appear as trustworthy sources that have the authority to substantiate conflicting claims. Official sources offer prepackaged, easily summariz[ed] interpretation through the established channels between the media and the authority. Most journalists who do not feel qualified to sort out the often conflicting scientific, technical, and political claims involved in environmental problems turn to these informed sources.

Excessive reliance on government information sources, as Corbett (1995) suggests, may focus the power of problem definition within the hands of the government, moving it away from individuals and environmental groups.

Similar to observations by Gelbspan (2004), 'scientific journals and publications' were infrequently used as information sources by reporters in this study. Although sixty-four percent said they 'sometimes' referred to scientific journals and publications, only five percent said that this was a 'frequently' used source of information. In the case of climate change reporting, Gelspan (2004:

75) observed that many journalists rely on secondary information rather than read scientific reports firsthand despite the fact that “the vast majority of the scientific papers on climate change are quite accessible” and comprehensible to even the scientifically untrained journalist.

Although journalists from developing countries, as reported in Chapter 3, perceived university researchers and academics to be neutral and independent sources of information, only nine percent of reporters in this study relied on them ‘frequently’ for information. However, a majority indicated that they ‘sometimes’ used academics (77%) as information sources.

One reporter indicated that in addition to the provided list he also referred to “colleagues and previous stories” as information sources. Another reporter commented: “With regard to newspaper reporting – especially in the provinces – a reporter will often look to the community (as well as scientific / industry sources) for an idea of how they view the sustainability of a project, and how much they are willing to tolerate in the name of progress.”

As the findings in this study show environmental groups, government, and the public to be the most frequently used information sources by New Zealand reporters in this field, this points to the role these parties could play in facilitating mediated communication of sustainability in cooperation with the mainstream media.

5.4.11 Judgements of newsworthiness of various aspects of sustainability

As detailed in Section 2.10 many have noted the journalistic process of news value judgement as a critical element in the coverage of S&E issues (e.g. Alexander 2002; Althoff *et al.* 1973; Dunwoody and Peters 1992; Gooch 1995; Harrabin 2000; Howson and Cleasby 1996; Valenti and Cragge 2003; and, Yang 2004). In a New Zealand context, Spellerberg *et al.* (2006: 141) noted: “The selection of news is not codified by rules. Instead, journalists make professional judgements about newsworthiness based on the editorial policy of the broadcaster or publisher, and by comparing the merits of each available story.” This process consequently has implications for the type of reports concerning S&E issues that appears in the local mainstream media. What is more is that, as Harrabin (2000), Gooch (1995), and Valenti and Cragge (2003) have observed, journalists’ judgement of newsworthiness of environmental issues differ from those of experts and members of the public.

Reporters and media managers in this study were asked to indicate the degree of newsworthiness they would attribute to a list of eleven factors that were identified as likely characteristics of a sustainability issue. They were asked to rate each factor using a 3-point rating scale – ‘highly newsworthy,’ ‘moderately newsworthy’ or ‘not newsworthy’. To compare the newspaper’s judgement of newsworthiness with those provided by proponents of sustainability, a purposive

sample of thirty-eight proponents were provided the same list of factors and rating scale, and were asked to indicate how they would rate the newsworthiness of each factor. They were asked to provide this rating based on what they believed were newsworthy; in other words, what they thought should be given media coverage. Although left optional, the invitation to proponents indicated that additional comments were welcome. Results are illustrated in Figure 5-9.

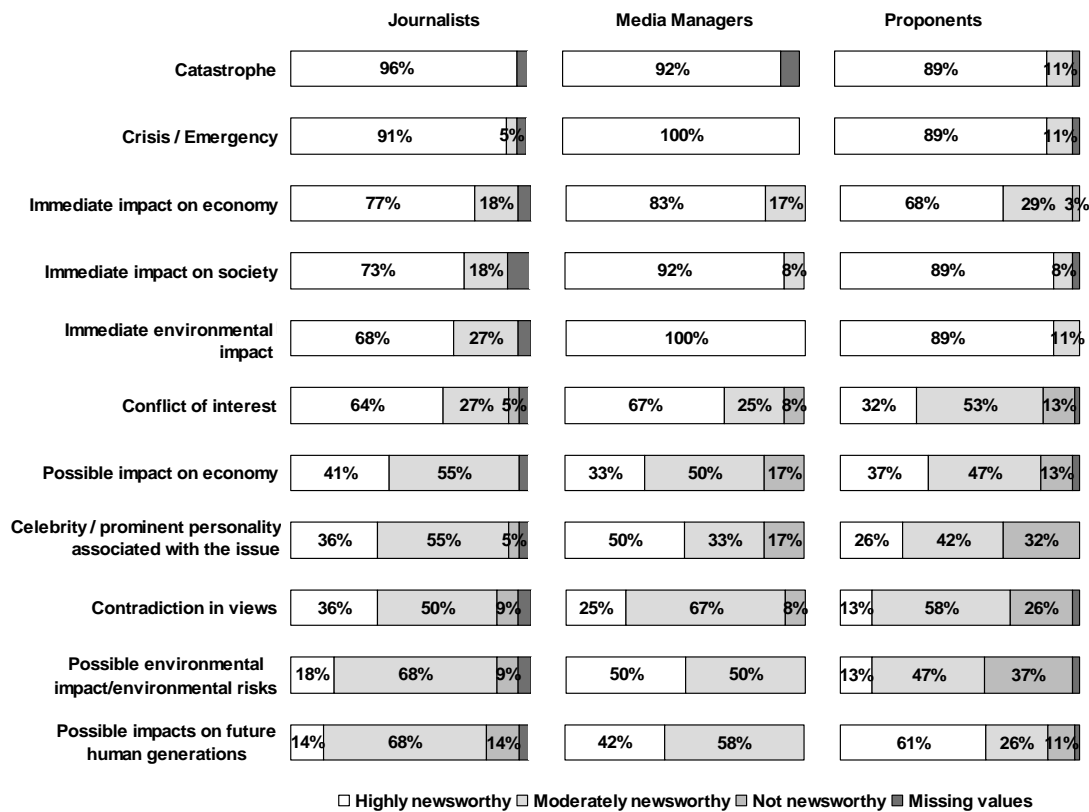


Figure 5-9 Degree of newsworthiness attributed to various aspects of sustainability issues reporting by reporters, media managers and proponents

Mann-Whitney U tests showed that there were no significant differences ($p > 0.05$) between reporters and media managers in their ratings of newsworthiness for all aspects tested. This was indicative that reporters and media managers shared a similar perspective in their judgement of newsworthiness of sustainability issues.

Evidencing Galtung and Ruge's (1965) news value of meaningfulness, one reporter emphasised that any "direct effects on readers" would make it highly newsworthy. In addition to the list provided, a junior journalist said that issues with "human interest or something that's a bit different [or] quirky" would also be deemed newsworthy in her organisation.

When reporters and media managers were analysed as a single group, a *Wilcoxon Signed-Rank test* showed a highly significant difference in ratings attributed to immediate impacts in comparison to possible impacts ($Z = -4.258, N\text{-Ties} = 24$, Exact $p = 0.000$, two-tailed). 'Immediate' impacts were

given a higher ranking of newsworthiness compared to ‘possible’ impacts. The low ratings of newsworthiness attributed to ‘possible’ impacts in this study supported Galtung and Ruge’s (1965) hypothesis on news media preference for unambiguous events. This finding adds evidence to earlier observations – that the media focuses on the “immediate” rather than the “potential”. For example, in news coverage of agricultural issues, Jackson (1991: 146) found that while the media provided good coverage of “immediate threats” to consumer health, they neither examined nor explained factors such as the long-term sustainability of food production, despite it being critical for the well-being of generations to come. As others (e.g. Anderson 1997; Friedman 1983; Gee 2000; Hamilton 1991; Harrabin 2000; Maloney and Slovonsky 1971; Smith 2000a; Yang 2004), have observed, the findings in this study suggests that the long-term nature of S&E issues that often entail uncertainty will continue to be a problematic area in related news coverage.

Comparison of ratings provided by newsmen (reporter and media managers combined) and proponents of sustainability, using *Mann-Whitney U tests*, found that their ratings did not significantly differ ($p>0.05$) for all but the three aspects provided in Table 5-6. The aspect, “catastrophe,” just missed statistical significance.

Table 5-6 Comparison of newsworthiness ratings provided by newsmen and sustainability proponents

Aspect of sustainability issue	Mann-Whitney U tests	Mean Rank	
		Newsmen	Proponents
Celebrity / prominent personality associated with the issue	$U=452.500, N_1=33, N_2=38, p=0.032$, two-tailed	41.24	31.45
Conflict of interest	$U=392.500, N_1=33, N_2=37, p=0.006$, two-tailed	41.91	29.78
Possible impacts on future human generations	$U=81.000, N_1=33, N_2=37, p=0.008$, two-tailed	29.36	40.97
Catastrophe	$U=81.000, N_1=32, N_2=38, p=0.061$, two-tailed	37.50	33.82

The newsmen group had a higher mean rank than proponents for the aspects ‘celebrity,’ ‘conflict of interest’ and ‘catastrophe’ indicating that they attributed a higher level of newsworthiness to these aspects. This was strikingly in line with Smith’s (2000a: 168) observation that three ingredients that the media would find hard to resist were: “conflict, event and personality.” The media’s interest in conflict may be due to a conviction among newsmen, as Maloney and Slovonsky (1971) pointed out, that conflict makes sellable news. Catastrophic events, as Greenberg *et al.* (1989b) observe, offers a dramatic visual appeal to news. In addition, conflict and catastrophes contain elements of negativity which, as Galtung and Ruge (1965) have suggested, is a factor that adds to the news value of an event.

‘Possible impact on future generations’, the very basis of sustainability principles, was noted as highly newsworthy by only three (14%) reporters and five (42%) media managers. The proponents group showed a higher mean rank compared to the newsmen group for this aspect indicating that proponents regarded it to be more newsworthy. Several proponents also provided various other aspects that they believed should be newsworthy which were demonstrative of the multidimensionality and long-term nature of sustainability; these included:

- Promise of political attention to issues.
- Moral dilemma.
- Peoples day to day lives – and actions – from purchasing choices to disposal of waste.
- Impact on health.
- Impact on our modern culture.
- Possible impacts on other humans right now.
- Possible impacts on other species, now and in the future.
- Possible impacts on whole ecosystems, wherever they are, now and in the future.
- Possible risks and effects of wars, which usually have substantial sustainability downside effects.
- Impact on biodiversity, flora and fauna.
- Impact on international reputation of New Zealand.
- Impact on culture of New Zealand.

This study found that although proponents and newsmen were in agreement in terms of the newsworthiness of certain aspects or angles of a story, their underlying reasons may differ. For example, the media would often provide coverage to an issue if they find a celebrity or prominent personality associated with the issue because of an underlying perception that it would help “sell” the news. Evidencing Galtung and Ruge’s (1965) news values of ‘personification’ and ‘meaningfulness’, one reporter in this study added that if the celebrity or prominent personality associated with the issue was a local person then it would make it even more newsworthy. A sustainability proponent may welcome the association of celebrities with issues, but for a different reason – as one advocate indicated:

Even the celebrity one should be highly newsworthy from an advocate’s stand point because (e.g., Al Gore and Leonardo De Caprio recently) it all adds to raise awareness and engage different sectors of society in relevant issues. (From a more principled “in theory” point of view, I feel something shouldn’t be newsworthy just because a “celebrity” says so, but in practice if it raises awareness and makes more “fashionable” an issue I’m advocating for – in this case, sustainability – then I’m generally pretty appreciative of it.)

Another advocate who also rated ‘celebrities’ to be highly newsworthy commented: “I think that [the documentary] *An Inconvenient Truth* had more impact with Al Gore being the leading light than if it had been just another documentary.” Similarly, another proponent said: “People are interested in celebrities, so if it raises awareness it is a positive thing.”

In a similar way as the newsmen, one advocate rated ‘possible impacts’ as not newsworthy and ‘catastrophe’ as highly newsworthy. He however clarified:

...a catastrophe could well be a transient event but it can be connected in people’s minds with more to come if nothing is done about the causes, whereas ‘possibilities’ might well be critically important should they occur but because they are not yet tangibly evident very few

people would be interested – denial, or the ‘something around the corner will fix it’ syndrome, or blind faith in some overarching power, kicks in: thus, ‘possibilities’ are not newsworthy.

Other advocates and proponents of sustainability who rated the item ‘possible impact on future human generations’ as moderately or not newsworthy were asked to explain why. Their feedbacks, as provided below, were indicative that their responses were a result of their views about how the public would react to such a news angle, rather than their own views about its importance:

I have been much involved in ‘green issues’ for many years. It is my experience to date that the ‘average’ New Zealander does not yet get very excited about the possible plight of ‘future generations’. As a society we are still very focused on meeting OUR perceived individual needs (really ‘wants’) rather than acknowledging that enough is enough. So I think discussion of impact on future generations while ‘worthy’ is not yet seen as interesting ‘news’ – so, it’s not yet very ‘newsworthy’!

[People]...tend to focus on this generation, and on the next two perhaps but are not very good at looking further ahead.

People respond to crisis and not to gradual or cumulative effects. People do not respond to the impacts on future generations, although they know they should (guilt without consequence or behaviour change)...In my opinion our society does NOT think of future generations or at best would not find it newsworthy in comparison to the other aspects you put forward...In my experience, if environmental impacts are directly linked to health or economy then this is a motivating factor to respond. But if it is only related to future generations (or even other species) then less weight is placed on it.

I personally think it is very high (for me) but for the general public – would depend on how it was reported...In New Zealand I don’t think the general public really consider that future generations will have any problems, as most adults over 22 (who are not the ‘converted’ to acting sustainably) are relatively comfortable with their life-styles, though most think they need more money!

I would argue that the future is of interest only to academics, not ordinary people...People are most influenced (or stimulated) by current events, and those in very recent history, but not by what’s coming unless the signs are in some way actually manifest – and even then only if this involves diminishing economic activity, loss of life or property, or other dramas of some sort or another. Thus what happens to future generations might be of some concern, but only to a very limited degree.

In brief, the comparison made in this study offers preliminary findings that some differences exist between proponents’ and newsmen’s judgement about newsworthy aspects of sustainability issues. The judgements of newsworthiness among newsmen appear to reflect the dominant trends that others have noted, with a focus on events (catastrophes and crisis) and immediate impacts. Proponents on the other hand are likely to regard aspects such as ‘impact on future generations’ to be more important.

5.4.12 Perspectives on news media coverage as provided by sustainability proponents

Further substantiating the recent concerns expressed in literature over the lack of quality media coverage of S&E issues in New Zealand mainstream media, sustainability proponents in this study

provided similar views. A few commented on the media's focus on immediate events at the expense of long-term issues. For instance, one sustainability advocate said:

From the news I do see, the big news is usually when there's an immediate or impending ecological or social disaster. The further out in time the potential impacts get, the less the media seem to cover it (in any great depth or length)...Global warming is starting to change that, but I still don't think that the news media currently consider as highly newsworthy 'possible' impacts on 'future human generations' – it's a bit too vague. [Could it be that it is] harder to get a personal angle? I saw some of the TV news last night and it was all just one item after another of a murder or murder trial, traffic accident or some other immediate/very recent reaction. And then sport...

Another expressed:

My feeling about [how the media defines what is newsworthy]...is that impacts on future generations will not be seen as very significant – only when something will impact 'my' generation will it become newsworthy. A slightly cynical view, perhaps, but that's what I see happening.

A Christchurch-based sustainability architect commented that although the problem of climate change had existed for decades, it was not until recently that the news media had given the issue any attention. He reasoned: "...now that climate change appears to be having a material impact – it can actually be seen – it has become news, at a time when it is probably too late to do much about it." Commenting on the lack of coverage of "peak oil" as an issue, he said: "We will hear about it of course eventually (in the context of newsworthiness), but only when tourism actually crashes, and the global economy follows suit ...This will then be front page news...". He went on to add:

When the evidence of unsustainability becomes so visibly evident that no one can deny it, when economies crash, when the seas inundate parts of the developed world, when crop failures lead to unexpected hunger in those same countries, then 'impact on future generations' will be newsworthy, but by then I fear it will be far too late.

Others commented on the unfavourable effects of the media's focus on conflict as a news angle in S&E news reports. A Christchurch-based sustainability advocate who indicated that "contradiction in views" should not be made a newsworthy aspect of sustainability issues reporting explained:

The contradiction in itself is not appealing, and often confuses (perhaps intentionally). The Christchurch Press does this a lot in its search for a 'balanced position' between its extremes in readership opinion of e.g. political left and right. Hence their recent coverage of Bjørn Lomborg's climate change denials long after he has been discredited and overwhelming science opinion has shown climate change human impacts to be real. It's a main reason why I do not subscribe to The Press.

A sustainability planner of the Christchurch City Council (CCC) commented that the media often "take a very negative 'angle' on environmental stories" and tend to focus on "conflicts between people and not necessarily the topic" in question or its entailed impacts. He added:

The media also enjoy the David and Goliath situation – conflict between a big organisation and a small individual. A good example of the media's lust with conflict is the length they will go to find disagreement or the "dirt" on what could otherwise be a good news story. For example the CCC provided a \$20 subsidy for washable nappies and the media hunted out a person that had a child turned away from a CCC early child care centre because they used washable nappies.

What is worse, he said, is when the media “try to find the conflict even when there is none.” In one occurrence, he noted that

after a Council meeting when all councillors were agreed on a topic, the media individually telephoned the councillors at home to see if someone had a different point of view. Then once this was found, they phoned back some others with the counter point of view to see what they thought; [therefore], the media were creating the conflict.

In brief, akin to criticisms provided in the literature, the above comments as well appear to be closely connected to journalistic judgments of newsworthiness and their commercial interests. While ‘immediate events’, ‘unambiguousness’, and ‘conflict’ continue to provide newsworthy angles for the journalist covering S&E issues, these aspects appear to consistently generate criticisms among advocates and proponents.

5.4.13 The newspersons’ response to criticisms of the journalistic balance norm

Journalistic balance appears to be well established within the media sector in New Zealand. According to the New Zealand Press Council (2005: 28) balanced reporting means “both sides (or sometimes more) of an issue are explained and the varying opinions or explanations of fact are recorded together.” In this way, “[r]eaders can make up their own minds, and the principles of accuracy, fairness and balance are met” (*ibid*: 28). In the same way, Standard 4 of the *Free to Air Television Code*, Principle 4 of the *Radio Code* and Standard P6 of the *Pay TV Code*, provide guidelines for balance within the broadcast media sector in New Zealand (Broadcasting Standards Authority 2006).

However, as detailed in Section 2.10.12, some have critically viewed this journalistic tradition within the context of environment journalism (e.g. Alexander 2002; Antilla 2005; Boykoff and Boykoff 2004; Gelspan 2004; Michaelis 2001; Mooney 2004; Ohkura 2003; Pawa and Krass 2006; and, Ryan 1991). In pointing out what may be regarded as an element of inequity in the media’s principle of balanced reporting, Michaelis (2001: 25) commented:

While media editors are very sensitive about the need for balance on environmental issues – avoiding appearing one-sided on issues such as climate change – they impose less control in other areas. Motoring journalists, for example, are usually given free reign to promote a car regardless of its environmental performance. Editors often avoid juxtaposing content that raises environmental concerns with car reviews.

To find out the newspersons’ response towards this specific criticism about balance, reporters were provided with conflicting statements concerning the emphasis of balance in sustainability issues reporting and other areas of reporting, namely, motoring and sports. They were asked to indicate its truth within the context of their organisation, using a 3-point rating scale – ‘definitely true,’ ‘somewhat true’ or ‘not true’.

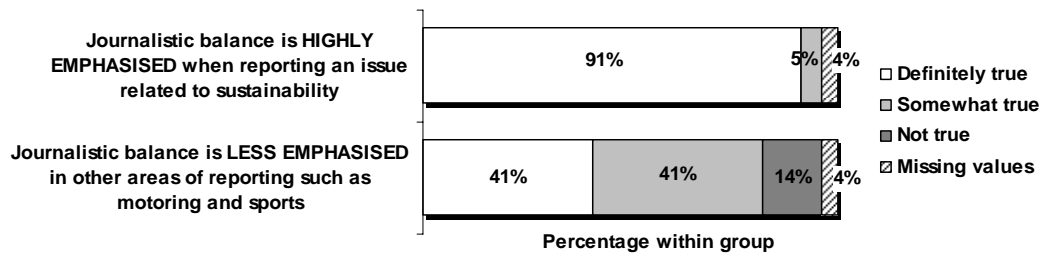


Figure 5-10 Emphasis of balance in sustainability issues reporting as opposed to other areas of reporting as indicated by reporters

As the quantitative results in Figure 5-10 indicate, almost all reporters (91%) indicated that it was ‘definitely true’ that their organisations highly emphasised journalistic balance when reporting a sustainability issue. Some provided the following additional comments which further clarified their response:

Journalistic balance is highly emphasised in every story we do regardless of what it is about.

Ideally, journalistic balance is highly emphasised in every story, but there can only be one headline and one first sentence. To some degree, there is no story unless there is a situation of imbalance between points of view. This is my personal viewpoint. Otherwise the story has no edge, is boring, and no-one will read it. One aspect or one side introduces the story, and the other side is then given for balance.

In a small community newspaper, this is particularly vital as there is a lot more accountability for journalists. In larger organisations it is easier to remove oneself once the working day is done – not so in small towns.

Balanced in the sense that without having put the questions to the company, as in the above example, the story would not be regarded as finished and ready for print. However, that would not prevent me or anyone having an opinion on who was to blame and going hard on them to explain and exposing any inherent inability to do so.

We have to seek the other side to any story, even if they choose not to comment we endeavour to tell them what is going in the story and give them time to respond.

To the opposing statement that journalistic balance is less emphasised in other areas of reporting, nine (41%) indicated that this was ‘definitely true’. In explaining why, one reporter said: “It may antagonise readers”. A chief reporter commented: “You cannot rehash the same arguments every time you run a story on a new car – it has to be new – ‘news’ – to make it.” Another explained: “Environmental stuff is not usually considered relevant when reporting motor sport.”

Nine (41%) others indicated that it was ‘somewhat true’ that journalistic balance was less emphasised in other reporting areas. The additional comments below provided by five of them further illustrate the newsroom situation:

Whether a car review should include an environmental impact report is a value judgement. I don’t agree that this relates to journalistic balance.

I really don’t know much [about] motoring reporting but I’d say there was no consideration to motoring’s negative effects written about with any regularity on motoring pages. Sports writers

are constrained by the need to maintain relationships with players but I would say they actually have more freedom to express their own opinion than news reporters.

We struggle to fill our motoring pages with local content stories and rely on car manufacturer press releases for copy. Having said that, we would give equal preference to press releases on the impact cars have on the environment. The main criterion here is that the material is motoring related.

Journalistic balance usually involves presenting two opposing views that are the crux of a story. Not referring to the environmental impact of sporting event in a story by a sports journalist has nothing to do with a lack of balance and everything to do with not boring the reader.

Often these stories are split – the sports journalist writes for the sport pages, the news reporter writes about the event from the other perspective if it arises.

Three (14%) affirmed that this was ‘not true’ within their organisations, of whom one added an elaborate comment:

...I find this question somewhat leading and lacking an understanding of journalistic balance. (Rule number one in journalism – never ask a question that puts the answer in someone’s mouth). Journalistic balance applies to what the story is about – it means being utterly unbiased and not injecting your own agenda into the story. If you are writing about a golf game...[and] something happens that highlights the environmental impact of the game, then you are likely to write a separate story on that, which probably isn’t likely to end up on the sports page...It’s not a matter of being unbalanced; it is just a matter of being clear about what you are writing about. Papers are in different sections so they can appeal to different people...What goes in the paper is in itself a balancing act.

In an open-ended question media managers were presented the issue of inequity concerning journalistic balance, using the same example of sustainability reporting vs. sports / motoring reporting as above. They were asked how they would respond to the criticism.

One editor disagreed with this criticism; he pointed out that:

Increasingly, car companies are focusing on the environmental impacts of their vehicle emissions and many media releases attest to this. The hybrid Prius is an example as are world wide efforts to reduce carbon based propulsion in favour of hydrogen or vegetable oil mixes.

Two other editors (17%) argued that the criticism was inappropriate, of whom one said:

Hard to understand environmental impact of golf! The object of any story is clarity around the subject matter. Readers interested in news about a car race are likely to be aficionados who probably would be bemused and confused if the story suddenly talked about how much fuel had been burned up in the process.

The other commented:

It’s a bit like having a policy banning pictures of people smoking. Zealots and proselytes in the reporter’s room – because they believe they are on the side of the angels – are a liability, in my experience. I find it bizarre that, below, the requirement for balance and objectivity might be considered to be a problem. We are a newspaper, not a propaganda sheet. I am a newspaper editor, not a commissar.

Another two (17%), however, agreed that this was the case, that balance was highly emphasised when reporting sustainability issues, but less emphasised when reporting sports or motoring. In an

interviewer one said “Well I suppose, that goes to the heart of what we mean, as journalists, when we talk about balance. Which tends, as you have correctly pointed out, to be focused on the actual issue at stake, in quite a narrow way.” When probed to explain further why that was, he added:

...If we follow through the thinking that lies behind that suggestion, in every story, we will have to cover...every possible angle...When we are covering that rugby game, not only would you have to look at sustainability issues, you’d need to look at ethnic issues,...economic issues, ...science and technology and education issues. So it is not practical when you are covering a rugby game, to look at every possible bit of balancing information that is associated with any event...The story would be impossibly long...[and] impossibly boring. And by throwing every bit of information at the readers about an issue, what are they to make of that?...So, it is [about] practicality, time and space, but also what people can actually grasp from a simple news story. But I do agree, that when we are reporting issues of environment and conservation and sustainability, that is when we would very much go into those areas, because that is what the story is about.

The other, an assistant editor who also agreed that this was the case commented:

No we don’t...look for those news angles. I think it is something that we don’t naturally think of when we are covering sports events and probably entertainment events. Why that is, I am not sure. We just don’t think like that. Our sports reporters are often only focussed on sports match stories, stories about the actual game. Sometimes reporters only report on the obvious and don’t look at the bigger picture. I am sure there are sports stories with much wider appeal that we don’t cover. The general news reporters are often thrown stories from the sports department because they may be contentious or not seen as true sports reporting but more news.

As the in-depth interview process allowed, the researcher questioned if the reason could be because specialist sports reporters are not well acquainted with sustainability or environmental issues. The editor responded:

I think that is the problem in there. Something that is so wide ranging as an issue, that is cutting through all areas, that everyone knows a little bit about it and probably don’t feel confident enough, to tackle it as a story.

Comments provided by seven editors (58%) (six of which are listed below) were indicative that the application of journalistic balance was dependent on the type of news in hand:

Not every story has to balance sustainability issues except where those issues are likely to have a major impact. It’s about relevance to the story. The sports pages are about sport. Petrolheads are unlikely to care about sustainability issues when all they want to know is who won the V8 series. But if the V8 series causes environmental problems, that is likely to be covered by most media as a separate story in the news columns.

People reporting on sporting events or new models of cars are writing for a particular audience. It is not within their brief to address sustainability issues. If such an issue arose in relation to one of these other areas of coverage, it would be covered as a separate news story.

Some motoring columns do emphasise environmental factors – though that is often not the main point of such columns. Environmental impacts would be and often are dealt with in the news pages. The sports pages are there to cover sporting contests, not other issues. Generally, environmental impacts would be dealt with as news, rather than be carried on “specialist” pages.

We would cover that...[but] not a sports story as such. Sports stories, is more result based, so it is not, they don’t look at the issues, it is just result based. If it becomes an issue sport story then it is covered in the main news bulletin...rather than in the actual sports story. And then the normal components of balance and fairness are all part of that.

We cover motor races as...a sporting event. I don't know whether balance, to use that word, or other interests come in, in terms of environment or sustainability. That simply has got nothing to do with the outcome in the execution of a motor race. But if for example, there were to be an environmental issue there, let us call it oil leaching and diesel fuel pollutants...would we cover that? Well we would, if an appropriate body were to say, this is having an environmental impact...But we wouldn't as a matter of course do that if we were just covering the motor race. I mean that would be nonsensical.

I would suggest that editors have to weigh up 'balance' with portraying the point of a story. For example, does a reporter writing an article on the opening of hunt season have to go into the years of anti-hunting debate? Balance does not mean injecting a point of view just for the sake of it. It would be different if a protest group was present at a car rally – then it would be wrong to ignore it, but if its not part of the story, why include it?

To some degree these findings give evidence to the point made by Michaelis (2001) that there is a distinction in the application of “balance” to environmental stories as opposed to motoring or sports. Based on comments provided by both reporters and media managers, it appears that journalistic balance is applicable to only a certain type of news reporting, in which an issue is at debate. Sports reporting may not fall in this category. Many reporters and media managers believed that it was not necessary to pursue balanced reporting for sports stories, unless an issue arises within an event, in which case, it is reported separately in the “news” section, rather than the “sports” section. Motoring may cover environmental aspects, but this appears an exception rather than the norm.

Regardless of longstanding traditions in the presentation of news, and the distinction of different types of news, there may be a necessity for reporters and media managers to be more critical in their portrayal of events such as sports, motoring, and entertainment, and perhaps to deliberately look for possible sustainability angles. In the case of sports, Mr. Klaus Toepfer, Executive Director of the United Nations Environment Programme (UNEP), had suggested at the 5th World Conference on Sport and Environment that the connection between sport and environmental sustainability is an area that requires more emphasis (Toepfer 2003). Toepfer asserted that sports and the sports industry have a major role within the sustainable development agenda (*ibid.*). He listed three central aims of the UNEP Sport and Environment Strategy: first, to integrate environmental considerations in sports; second, to promote environmental awareness through the popularity of sports; and third, to develop sports facilities and goods that are environment friendly. He regarded the Sydney Olympics' initiatives towards more environmentally sound games, as a significant development towards these goals. Kaspar (1998: 69) suggested that the staging of large scale sports events in balance with environment and culture would require “a cooperative approach between the organi[s]ers, politics, sponsors and the media”. Therefore, it is arguable that there may be a necessity for a change in how sports reporting is viewed by the media.

Motoring journalism may be another area in the news media that would require an adaptation to incorporate sustainability. This is particularly important considering that the media have been

perceived to be part of the reason for a car dependent society. As Whitelegg (1997: 218) put it: “Car ownership is not a desire but an obsession, and it feeds on the complex web of media, advertising, film and television symbolism that has taken root in the thinking of the vast majority of the global population.” He argued that, “[m]otorised transport, particularly cars, has successfully colonised key aspects of human psychology. People believe cars offer freedom, power, sexual fantasy and reinforcement of personal esteem and ego” (*ibid*: 36). He went on to add how some motoring magazines and motoring correspondents have contributed to such promotion (*ibid*: 36):

In March 1994 a motoring correspondent in *Top Gear*, a BBC magazine, thought it perfectly acceptable to refer to a new car model he was testing as capable of ‘snapping knicker elastic at 50 paces’. An understanding of psychology is more important than a morbid fascination with the sexual fetishes of motoring correspondents. If cars can be sold on the basis of this nonsense and if the advertising industry works in the same way then society is in deep trouble. Sex, freedom and power score very highly as behavioural drivers and motivators. Going by bike, walking or catching the bus are not likely to conjure up anywhere near as powerful a cocktail.

Banister and Button (1993: 20) asserted that “on the global scene transport is a major user of scarce resources and a significant contributor to environmental degradation.” They detailed that environmental degradation caused by transport takes on a wide scope; in addition to global warming, other impacts include transboundary pollution like acid rain, and local environment degradation such as atmospheric pollution, “higher noise levels, destruction of established social environments” and “deteriorating aesthetics” (*ibid*: 19-20). Banister (2005) pointed out that overcoming barriers to successful implementation of sustainable transportation programmes would require a process that is interactive and opens the opportunity for individual participation and public debate, and that this would require the support of the media. Therefore, in the case of motoring journalism, it may be suggested that in the face of global warming, and other problems caused by transportation, motoring journalists and journalists covering transport in general, may need to take a more active role in communicating sustainability issues and sustainable transportation in particular.

5.4.14 The newspersons’ response to information evaluation and ‘weight-of-evidence’ approach to reporting

To enhance public understanding of S&E issues, it appears necessary for journalists to evaluate related information; however, evaluation may be prevented by concerns that it jeopardises journalistic objectivity and balance. Sessions (2003) reported that because of government regulations on balance, science journalists in New Zealand were reluctant to evaluate scientific information. She found that to avoid accusations of bias, journalists opted for the ‘balance’ approach instead of the ‘weight-of-evidence’ approach, although the latter was better able to provide an evaluation of claims by showing which claims were backed up by the most scientific evidence. In the case of environment journalism, Friedman (1983: 27) observes that investigative and interpretive reporting [where evaluation would be required], are “precisely where reporters act

as watchdogs and tell their readers what things mean” by “putting events and issues into context;” without which a mass medium is unable to play an alerting role in its society. However, information evaluation may not be perceived as a simple task by the media. As the New Zealand Press Council (2005: 28) pointed out:

The Press Council receives complaints from time to time about newspaper stories on controversial social issues of the day such as immunisation and climate change...The combination of advocacy by those challenging authorities in a technical subject along with the publication of their views, presents the news media with a dilemma. Those not scientifically qualified in a topic under debate might still claim rights to air their views on an equal footing as a matter of balance. The press in general might dispute that claim, but not have the expertise in its own ranks to assess the merits of the claim...

Mooney (2004: 28) maintains that the “journalistic norm of balance has no corollary in the world of science.” He explained that scientific consensus is built based on replication of study and repetitive testing of theories, which journalists find difficult to present in a balanced report. He clarified (*ibid*: 28):

Journalists face a number of pressures that can prevent them from accurately depicting competing scientific claims in terms of their credibility within the scientific community as a whole. First, reporters must often deal with editors who reflexively cry out for “balance.” Meanwhile, determining how much weight to give different sides in a scientific debate requires considerable expertise on the issue at hand. Few journalists have real scientific knowledge, and even beat reporters who know a great deal about certain scientific issues may know little about other ones they’re suddenly asked to cover.

To find out the newsmen’s responses towards the need for evaluation when reporting sustainability issues and their perceptions about how this may impact on journalistic balance, reporters in this study were asked to respond to three statements concerning evaluation. The first stated that evaluation was encouraged for the purpose of facilitating public judgement. This was followed by two contrasting statements that evaluation was discouraged; one, because it undermines journalistic balance, and two, because the public should be left to make their own judgement about issues. Reporters were asked to rate the degree of truth of the statements within the context of their organisations, using a 3-point rating scale – ‘definitely true,’ ‘somewhat true’ or ‘not true.’ Their responses are presented in Figure 5-11.

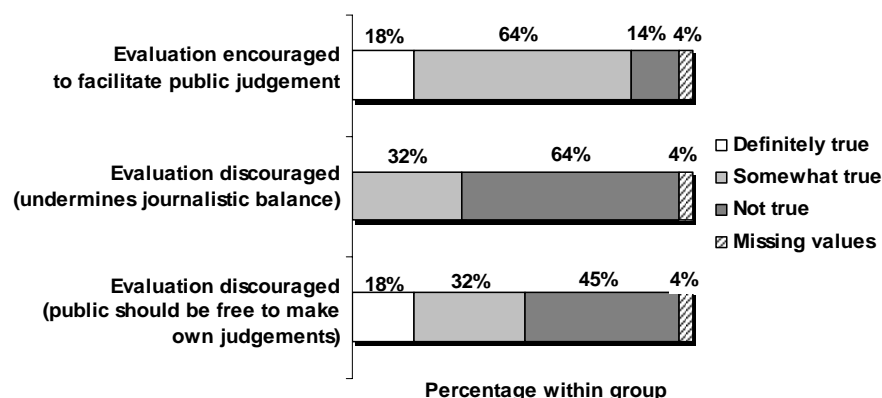


Figure 5-11 Media stance on evaluation of information as indicated by reporters

A majority of fourteen (64%) indicated that it was ‘somewhat true’ that evaluation of information concerning sustainability issues was encouraged within their organisations to facilitate public judgement of the issues. They provided the following additional comments that further clarified their perspectives:

In the case of an opinion column this is fine. The whole idea of opinion columns is to encourage public debate. If it is a general news story then you just print the facts and leave the public to make their own decisions. Ten facts versus three pretty much speaks for itself really. You don’t need a reporter to spell that out.

Newspapers are not scientific journals and big issues may need extended debate over time. One scenario may be outlined and then the paper will have an opposing position outlined the next day.

Evaluation yes, but always backed up by a comment or statistics, so that it is not just the journalist’s opinion. The idea is more to get issues and ideas out in the public domain. This leads to more views surfacing which can be added to the entire picture.

There is no written policy or otherwise on this in our newsroom. It is neither encouraged nor discouraged. However, it is definitely allowed. I can’t think of an instance where the editor has advised against it.

One reporter suggested that it was “possible to present information in a balanced way while still suggesting that the weight-of-evidence falls on one side of an issue.” Providing a similar view, another said:

I have a problem with the use of the word ‘evaluation’. I believe it is a journalist’s job to take raw information and use skills of the trade to make it into an article that the public can understand. To me, this automatically involves evaluating data. This does not necessarily mean judgements are being made.

Two others, quoted below, emphasised that evaluation was inevitable:

Have to evaluate information and the source. There is a lot of misinformation out there!

Reporters must be free to question.

Another, however, pointed out the limitation in a reporter’s ability to evaluate since “reporters are not able to assess the epistemology behind claims, assess the stats, [and] the controls used, but can make a ‘common sense’ appraisal.”

On the other hand, seven reporters (32%) indicated that within their organisations it was ‘somewhat true’ that evaluation was discouraged so as not to undermine journalistic balance. Seven (32%) also said that evaluation was ‘somewhat’ discouraged because of the stance that people should be left to make their own judgements. A senior journalist, however, pointed out that “evaluation doesn’t necessarily make for an unbalanced story, so long as the evaluation includes more than one point of view.” Another reporter clarified that the emphasis on balance and evaluation was case dependent in her organisation. She explained: “For example, if it is for a news report, then evaluation is

discouraged, but if it is a panel discussion, then some is encouraged. For my part as a news reporter however, my opinion doesn't count." A chief reporter commented:

...there is no policy on this in our newsroom. My own position, which the editor has not taken issue with, is that the public should be free to make their own judgment about moral issues. However, when the subject matter is a scientific issue that can be evaluated empirically, the reporter has a duty to inform the reader in a way that serves the integrity of information at his disposal.

The need for evaluation and the weight-of-evidence approach in environmental reporting and concerns over implications for journalistic balance was presented to media managers in an open ended question. They were asked to indicate how their organisation dealt with the issue.

Seven (58%) stressed that the public should be free to make their own judgements, of whom four commented:

We try to bring as many facts as we can from both sides of the argument then allow the reader to make a reasoned judgement.

By presenting facts from a number of sources and clearly stating what those sources are. This leaves it free for the public to follow up should they wish. For example, when reporting on 1080⁶⁶, the public are always made aware of [where] more information is available from.

It is a tricky and sensitive issue. We can only report what is available to us, and so long as we are diligent in uncovering, assessing and reporting all aspects of an issue I think that's all that is expected of us, and I accept that.

We're not scientists. We present the views, but the public does have to make its own judgement.

However, there appeared to be differing views concerning information evaluation and its implications for journalistic balance. Four (33%) were of the view that evaluation does not oppose journalistic balance, of whom one commented:

We do feel the public needs to be able to hear both sides of an argument and make the call themselves. However, that means giving them quality information, so if the balance is swayed towards one side in terms of the evidence available for two opposing points of view, that should be reflected in the story.

In responding to this question in an interview, another editor said:

I don't have any issue at all with what you are saying there. With reporting these issues, we should give the reader a sense that the weight of opinion and research and findings is in one camp or the other. We shouldn't present them as equal...We are obliged to give people the sense of where the weight of opinion is. So I agree with that. Whether we do it successfully all the time is another matter, but it is something that we strive to do.

When probed if such reporting would oppose journalistic balance, the above editor affirmed: "Not at all. Absolutely not." Similarly, a news and current affairs producer, who was agreeable to the need for evaluation, said:

⁶⁶ 1080 (pronounced ten-eighty) is a name used for the chemical sodium monofluoroacetate, a pesticide used in New Zealand for killing mammalian pests such as possums and rodents.

No, it wouldn't be against journalistic balance. I don't think there is such thing as totally objective journalism. I just think that is a myth. You can never take an aspect of subjectivity out of journalism. That debate I think, at least to me is well and truly over. And again, the notion of fairness is the key thing.

However, on the other hand, he emphasised: "People have got to make up their own minds," in particular when it is not a clear-cut issue or one that might contain various assumptions. "It is certainly not for us to say [to people] that this is what you must think." He also stressed that evaluation needs to be done with caution. He regarded climate change to be "politically charged" where concerns are often expressed by a "number of parties with vested interests and scientific interests." He clarified that in reporting such views if the reporter gets it "wrong [and] misrepresent[s] a particular view point" then there will be complaints, coming through from the "formal complaints process [i.e. the] broadcasting standards authority," to deal with.

In reference to journalists evaluating and making clear the 'weight-of-evidence', an assistant editor said: "I would hope that they do...". She, however, expressed uncertainty over the degree to which this was done in her organisation. She said:

I am just wondering if we do that on every story. We always try and get both sides of the story...I am not sure that we do...I think. So in a way we are not being fair to our readers probably. We are not saying that we spoke to ten people who said blah blah blah, and three who said...we probably dress it up as a story with just comments from both sides.

Even so, the above media managers pointed out the difficulties in evaluating scientific information and factors that are likely to limit evaluation:

Reporters are seldom experts in the subjects they cover. While in an ideal world they would be able to analyse and evaluate the data themselves, most are in no position to do so and rely on expert advice – which can differ. We are not experts in...the debate over the ozone [for instance]...

You have to remember...[in] news reporting on television...you are dealing with stories which could be anything, from 30 seconds to rarely if it ever would get beyond two minutes...so you haven't got a great deal of time to explain the concerns of the proposition, [provide] an element of debate, and possibly some sort of summary of facts or conclusion. You haven't got much time...

That is a problem for a newspaper, because we don't have the space, we are not a scientific journal. We are trying to digest issues into readable articles for our readers who want...quick [information] and [we] hope if they are interested in the subject they will go and search out...[further] information...Also, let's say for example a reporter did present a story with ten people that have said this, three people are opposing [therefore, showing the weight-of-evidence] – they could write that story, but then it goes through so many different hands. [So] a reporter may give us a story that is...500 words [but it needs to be only] 200 words or 100 words...so some things are going to be cut out... that is just the way that the newsroom, [and] the newspapers work.

Three media managers (25%), on the other hand, were not in favour of evaluation and believed that it would oppose journalistic balance. The first, a broadcast media editor, said: "We don't evaluate that way. We have very strict criteria. We have whole books dedicated to fairness [and] balance..."

When the researcher questioned the necessity to show the ‘weight-of-evidence’ to help public judgement, he said:

No we wouldn’t do it like that, we [would report that]...these people say this [and] these people [say otherwise] because there are no absolutes in any of this...Because, like anything, the truth is probably somewhere in the grey area in the middle – may be slightly that way, may be slightly this way...I don’t know.

The second, an editor of a newspaper, said:

It depends on context. Your example of climate change as a subject is interesting. It’s not as simple as, say, paedophilia, or poor economic policy. I take a contrary view...: Now that the fact humans are singularly responsible for global warming and are actually capable of reversing it in a cost-effective way are accepted as inviolable, absolute truths (to which our Government jumped the queue to subscribe) do the media not have an obligation to give voice to those informed voices which might question such wisdom? Anyway, why should a newspaper, which ought to be populated with healthy sceptics – sacrifice its independence by capitulating to one side of a debate? Or is there nothing left to debate?

The third, also a newspaper editor, expressed:

Generally, we leave the public to make their own minds up though presenting both sides of an argument. Readers are often smarter than we assume. In general news, it is not the reporters’ job to promote one side over another – indeed, this would be wrong professionally and represent a slippery slope that can lead to propaganda. There are a few occasions when the reporter – and by extension, the newspaper – may push a particular viewpoint but that would generally be based on a judgement of local (i.e. our readers’) interest.

Based on the above responses, it appears that newsmen’s views concerning the need for evaluation are varied. A general stance on evaluation and the weight-of-evidence approach and their implications for journalistic balance remains unapparent in this research.

In a recent national symposium entitled – *Significant Viewpoints: Broadcasters Discuss Balance* – organised by the New Zealand Broadcasting Standards Authority it was evident that broadcast news executives, programme directors and academics alike were in agreement that “balance” was a confusing and misleading term that often causes problems for journalists. In contrast to balance requirements under the Broadcasting Act of 1989, Don Rood, of Radio New Zealand, pointed out that “the print media operates in a much less regulated environment, self-governed through the Press Council” (Broadcasting Standards Authority 2006: 47). Even then, he said, it is not compulsory for newspapers to join the Council; hence, “New Zealand newspapers can take a much freer editorial line than their broadcasting counterparts” (*ibid*: 47). However, in this study, that comprised largely print media organisations, although editors’ stance on balance was varied, almost all reporters (91%) affirmed that their organisations emphasised journalistic balance when reporting an issue related to sustainability. Deliberation within the print media sector on the relevance and implications of “balance” for journalism in general, and environment journalism in particular would help clarify their stance towards balance, and the uncertainty concerning the ‘weight-of-evidence’ approach to environment journalism.

5.4.15 Degree of importance attributed to potentially ‘educative’ and ‘empowering’ aspects in sustainability issues reporting

As discussed in Section 2.10 of this thesis, a commonly occurring criticism is that reporting of S&E issues are often simplistic, in that they lack educative and empowering aspects, solutions to problems, and context (See for example, Alexander 2002; Bowman and Hanaford 1977; Corbett 1995; Kensicki 2004; Ohkura 2003; Valenti and Cragge 2003; Wilkins and Patterson 1990).

To evaluate media receptiveness towards educative and empowering aspects in reporting, reporters and media managers in this study were asked to indicate the degree of importance they would attribute to a list of nineteen aspects in reporting (the majority of which have been identified as potentially educative or empowering in literature). They were asked to provide their ratings using a 3-point rating scale – ‘highly important,’ ‘moderately important’ or ‘not important’. Results are presented in Figure 5-12.

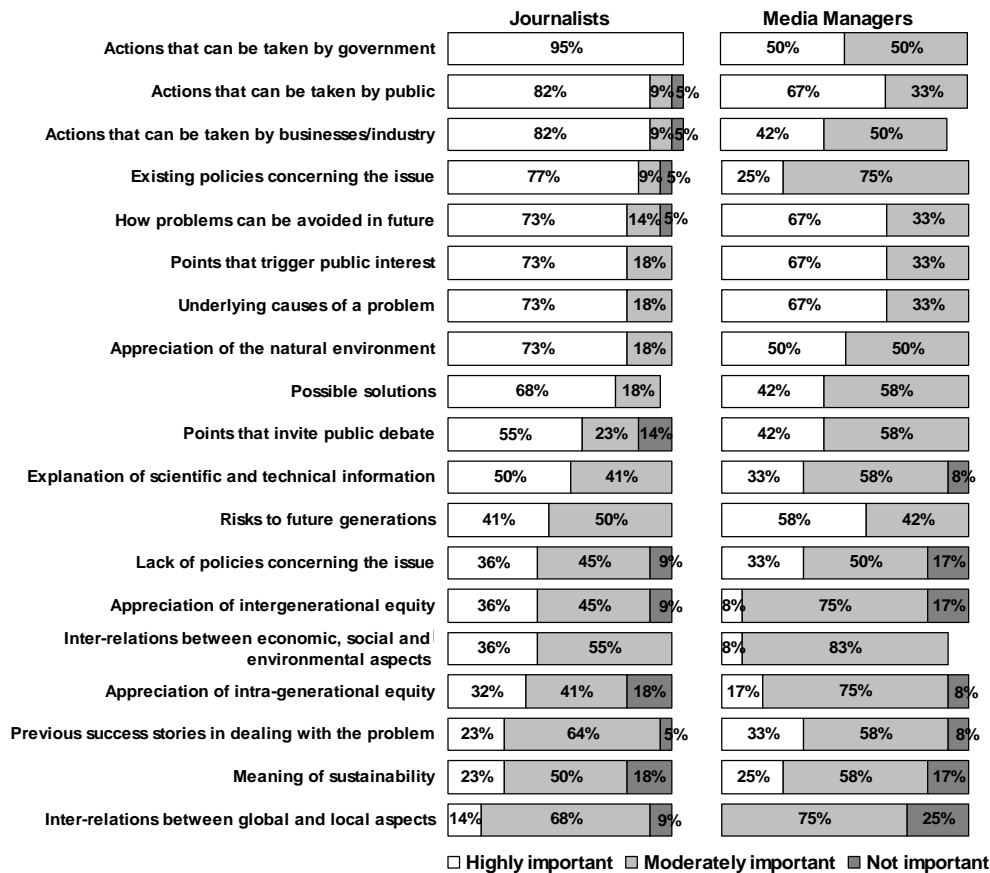


Figure 5-12 The degree of importance reporters and media managers attributed to potentially ‘educative’ and ‘empowering’ aspects of sustainability issues reporting

A *Mann-Whitney U test* showed that reporters and media managers significantly differed ($U=52.000, N_1=19, N_2=11, p=0.022$, two-tailed) in their total scores for the degree of importance they attributed to the various aspects. Reporters showed a higher mean rank (18.26) when

compared to media managers (10.73) indicating that they attributed a higher degree of importance to the various potentially 'educative' and 'empowering' aspects of sustainability reporting than did media managers. Although it was not feasible to draw definite conclusions as to why such a difference existed, it may be due to, as LaMay (1991) points out, the fact that most reporters are aware of the limited scope of the reports they produce. He regarded environment reporters to be "the most vocal members of a larger group of reporters from many other beats, all of whom are beginning to feel that the information marketplace as it now operates doesn't work very well" (*ibid*: 105). Based on his many affiliations with working reporters, Associate Professor Jim Tully, head of University of Canterbury's School of Political Science and Communication, observed that in New Zealand reporters who cover the environment comprise of individuals who gravitate towards the environmental round because of their personal interests in the subject (personal communication, 6 June 2007). Therefore, in a way, he says, environment reporters tend to be advocates. Likewise, Yang (2004: 95) observed that journalists covering environmental issues in America were "sympathetic to environmental causes" and were "concerned about environmental problems." One reporter in Yang's study indicated that most "of the journalists are in the field because they care about the environment" (*ibid*: 95). These observations may serve to explain the differences between journalists' and editors' perceptions about the importance of educative aspects of reporting.

Although reporters may believe in the importance of educative and empowering aspects in environmental reporting, a complete "educative role" may be a difficult task for a reporter to take on. As one chief reporter in this study pointed out:

It is very rare that a reporter would get time to cover all these aspects of a story like this on a daily newspaper. In the context of a feature (where you may have a week to write something as opposed to half-an-hour) you can go into more detail, add background information and talk to more people. In the case of a general news story when you have to work to a deadline, it is often limited to about 300 to 500 words and you have to use those words to get the issue across in the most simple and concise manner. In this case scientific and technical information and expert opinion often confuses the issue and leaves you with a story your average Joe will not understand. It is quite a fine balance. Often these issues are covered in subsequent stories and follow-ups.

In a similar way, Harrabin (2000: 52) observes that "news and current affairs journalism often involves painful compromise" where journalists are well aware that they are oversimplifying the story, but are left with no other way of telling the story, if they are to complete the story within the tightly allocated research time frame. He went on: "The more angles a journalist explores in any given story, the more time it takes. When journalists are under pressure to publish or broadcast, and many news media are cutting costs by reducing their staff, this is a problem" (*ibid*). In short, although reporters in this study recognised the importance of educative and empowering aspects of reporting, it remains a question if they would be able to practise this form of reporting.

5.4.16 Newspersons' receptiveness towards an educational role in communicating sustainability and their perceptions about their commercial interests as an impediment to such a role

In Section 2.8.1, it was detailed that because of the media's capacity to influence public environmental knowledge, opinion, concerns and behaviour, many have emphasised their educational role in communicating related messages (e.g. Ben-Peretz 1980; Chan 1998a; Brothers *et al.* 1991; Harris 2004b; Howson and Cleasby 1996; Sudarmadi *et al.* 2004; Parker 2003b; UNESCO 2005a; UNESCO 2005b; UNESCO-UNEP 1990; United Nations 2004). In New Zealand, Spellerberg *et al.* (2006: 144) stated: "We believe that the media and journalists have a very important role to play in informing people about how to adopt good environmental practice". In particular reference to television, which they considered to be a strong force in society, they suggested that "it [was] critical that television...play a much more proactive role in environmental responsibility" (*ibid*: 145). These perspectives appear to suggest that the media have a particular social responsibility in their coverage of S&E issues considering the potential effects that can result from such coverage. In this case study, these views were interpreted as suggesting a need for a *principle of media responsibility in environmental education* as way for expressing their social responsibility – this formed one aspect of the 'social responsibility approach' examined in this case study.

On the other hand, as addressed in Section 2.9, considering the mainstream media's commercial interest, many have raised doubts about their capability to educate and efficiently communicate S&E issues; some have even suggested that it is unlikely that the media would convey messages that may endanger their advertising revenue (e.g. Dispensa and Brulle 2003; Edwards 1998; Gelbspan 2004; Henderson and Weaver 2003; Herman 1999; Hessing 2003; Howson and Cleasby 1996; Humphrys and Williams 2005; Kenix 2005; Krönig 2002; Okigbo 1995; Shanahan 1993; Shanahan 1996; Sharma 2000; Sims 2002). Rosenberg (2002) maintains that media ownership and commercialisation has had an observable impact on media content in the United States – news is sometimes suppressed when it is in conflict with a medium's financial interest, or, to protect its owners or the interest of its advertisers. Rosenberg cautioned that similar trends of influence may arise within New Zealand media, considering that the ownership of New Zealand media has become highly "concentrated in the hands of large overseas media organisations" that have world-wide commercial interests (*ibid*: 88).

To find out media receptiveness towards an educative role in communicating sustainability and thus towards a *principle of media responsibility in environmental education*, and the extent that they would go to carry through this role, reporters in this study were asked to provide their views on how they thought their organisation would respond towards three identified media roles for the promotion of 'sustainable consumption': (i) shape sustainable consumption behaviour; (ii) raise

awareness about the negative social and environmental impacts of excessive consumerism; and, (iii) raise awareness about the use of psychology in advertising. A fourth statement (iv) asked how their organisation would respond to taking on an educative role in communicating sustainability. They were asked to respond using a 4-point rating scale – ‘yes,’ ‘likely,’ ‘unlikely’ or ‘no’.

Media managers were posed similar questions as above in an open-ended format. Through a qualitative analysis, their responses were categorised to indicate their various levels of receptiveness and presented in percentages in quantitative format. In an additional fifth question, (v) media managers were asked to respond to the media’s role in education as suggested in the *United Nations Decade of Education for Sustainable Development* implementation plans. It was assumed that a greater readiness or willingness expressed by the media to take on an educative role in communicating sustainability would be indicative of their receptiveness towards a *principle of media responsibility in environmental education*, which might in turn lead to more and better reports on sustainability issues.

(i) Media willingness to take on a proactive role in shaping sustainable consumption behaviour

Reporters in this study were asked if they believed their organisation would take on a proactive role in shaping sustainable consumption behaviour in New Zealand society, considering that the media have had an influence in shaping other behaviours such as recycling. As Figure 5-13 illustrates, ten reporters (45%) indicated a definite ‘yes’ while seven (32%) said that this was ‘likely.’ One chief reporter added: “We already do, by supporting our local recycling centre and frequently writing articles on what they and other organisations like them are up to.”

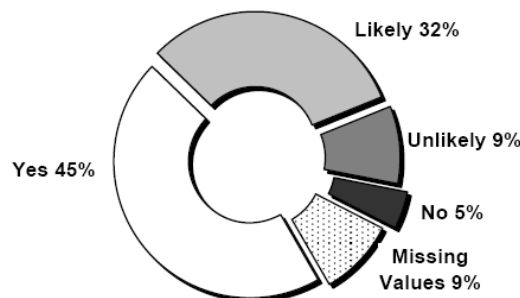


Figure 5-13 Media willingness to take on a proactive role in shaping sustainable consumption behaviour as perceived by reporters

Although one reporter said that her organisation was ‘likely’ to take on such role, she clarified: “To the point where we would report on any recycling scheme that was being set up in town. We do not run articles pushing anything unless there is a story behind it.”

On the other hand, a reporter who indicated a definite ‘no’ explained: “Not a daily newspaper’s role as I see it.” Another said:

To my great disappointment I say unlikely. I'd like to think that some sort of campaigning could be done but I think a weekly paper has not got the space and time to do this as well as a daily which can devote one page a week on an issue. In a weekly you either fill up a high percentage of the paper with one issue or drag on for longer than anyone thinks sensible – I imagine.

Following a qualitative analysis, the responses provided by media managers to this question were divided to three categories as illustrated in Figure 5-14.

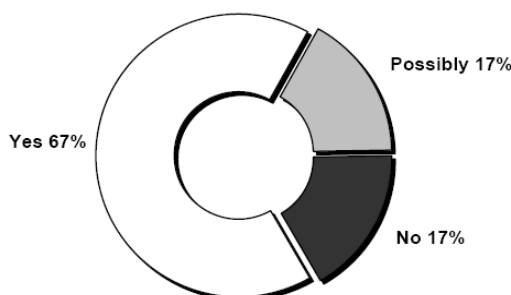


Figure 5-14 Media willingness to take on a proactive role in shaping sustainable consumption behaviour in New Zealand society as indicated by media managers

Eight editors (67%) were positive about taking on such a role. One editor, for instance, affirmed: “We could certainly imagine a campaign around such a scheme, supporting it.” In an interview, another newspaper editor said:

I think that the issues of sustainability are becoming very important and they are mainstream interest and what newspapers are going to get into, is trying to change the agenda around it, and actually influence how people feel, by good journalism and campaigning on things which are firmly grounded. I have got no doubt that this is going to become of increasing importance to people and we are going to do a lot more reporting around climate change and sustainability. It is going to become as big a story as education, health or the economy over the next few decades, because we can see what is happening to the world, we can all see how our lifestyles are killing us, and killing the environment, and people are concerned about them. I think those concerns are becoming mainstream concerns...So in answer to your question, yes.

However, although they expressed receptiveness to such a role, comments provided by a few of these media manager were indicative that such a role would be conditional:

Yes. No one questions the wisdom of encouraging people to conserve and recycle. However, preaching to the point of hectoring brings diminishing returns.

Yes, but frankly, it would be based on whether it had a spin-off for us in terms of readership. In the end the newspaper is geared towards readers' needs and wants. If they didn't want it, or need it, we wouldn't do it.

I think we would be open to it. We have pulled together a number of features in our Saturday weekend sections...One quite recently which looked at the business of being green... businesses who are operating in an environmentally sound way but still making money and what they are doing. We've also [written] stories about how much is thrown into a landfill and that sort of stuff. Whether we would get behind a campaign or be a bit more educating to our readers? Possibly. Probably...not something we are going to generate. But if someone, like City Council, came and said, you know, a huge amount of stuff is getting thrown away, we need to do something about it, would you get behind us with a campaign, we probably would.

Of two media managers (17%), who indicated that taking on such a role was a possibility within their organisations, the first, a news and current affairs producer, said that it would depend on the ratings a related programme might receive. Referring to a current affairs programme that had run stories on issues such as fair trade coffee, and peak oil, he expressed that the programme's ratings was of concern. He pointed out that theirs was after all a business, hence, they may run programmes if it rated well. He added:

If you wanted to run a competition – who can turn the most junk into the most dollars as a sort of reality show, and there is ratings in it, sure we will consider any idea, we love ideas. But as a sort of a goodwill thing to the community, I'd be very surprised. In any way, I don't think it is really our role.

The other, a broadcast media editor, explained that relevant contents may be covered but that the objective would not be to "shape behaviour." He said:

A more active role...not in news we wouldn't, no. But...in our feature material, it could possibly be looked at. In our science programmes, it could be looked at. The difference here is that we wouldn't be doing it as a means of shaping community attitudes or practices. You would be looking at doing it because this question has been raised or this practice exists...that is the route we would take, but we wouldn't sit there and advocate. We will take it on because of the news value or the human interest in it. We wouldn't be taking it on as advocates.

The two (17%) who indicated that they will not be receptive to such a role provided the following comments:

Our primary role is to REFLECT public opinion, rather than shape it. However, there will be occasions when we will be seen to "influence" purely by reporting the facts that are available to us. Perception and reality don't always match, but perception is what wins the day.

It is not our role to shape anything in New Zealand, only to report on what others do to shape public opinion. Obviously, recycling is a 'socially acceptable' practice and would be treated as such, but not in a proactive way. Instead, we would happily report on another organisation's proactive attitude towards it.

Media managers were asked to specify the type of content such an effort would include. Although none gave details on the type of messages that they would carry, six editors said that such contents could appear in a variety of forms which included: news stories; personal experience stories; readers' letters; regular columns; campaigns; features; special programmes; editorials; and, commentaries. Two editors, on the other hand, clarified that such contents will not be in news, but may be run as a programme or a feature.

(ii) Media willingness to discuss the negative social and environmental impacts of excessive consumerism

As Figure 5-15 shows, in response to the question – In order to promote sustainable consumption in New Zealand, do you believe your organisation would run programmes / articles that discuss the negative social and environmental impacts of excessive consumerism – eight reporters (36%) indicated a definite 'yes'.

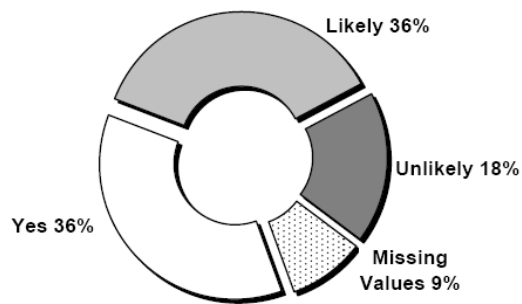


Figure 5-15 Media willingness to run programmes / articles that discuss the negative social and environmental impacts of excessive consumerism, as perceived by reporters

Another eight (36%) said that this was ‘likely’, of whom four commented:

...in the context of opinion columns or features this is absolutely fine. Of course it’s not our call if there is a McDonald’s ad on the opposite page – we all know if there is no advertising there is no paper.

But it might not give them high priority.

...our organisation would be open to writing articles if a person or organisation came forward with a story about consumerism. It is not something that we would actively seek out though.

I think there is space for serious stories on this issue. Possibly not in news but in features and the opinion pages.

Four others (18%), on the other hand, indicated that the running of such articles was ‘unlikely’ in their organisations. One clarified:

Too big and amorphous an animal. We would always report a local person’s views. As for encouraging consumerism, ask an advertiser. But in my view, businesses want to sell, got to make a living, public want to buy. As they say, ‘don’t shoot the messenger’.

Another commented: “I think more and more news stories discourage consumerism. ‘Media content’ is vague. Do the critics suggest editorial should counter ads?” In a follow-up phone interview, he clarified his response:

Media is a vague term that includes advertising and editorial. As a journalist we ignore advertising. There is a distinction between advertising and editorial. Editorial does not promote consumerism. We would run articles about consumerism but only if we regard it to be newsworthy, entertaining or something that can educate or inform the public. But we won’t run the articles to push sustainable consumption as a cause, as a lobby group would do, and that is the way the question is worded. I would write stories about sustainability, but I would not write them to push the cause. That is what opinion pieces are for.

Media managers’ responses to this question were divided to two categories as illustrated in Figure 5-16 following a qualitative analysis.

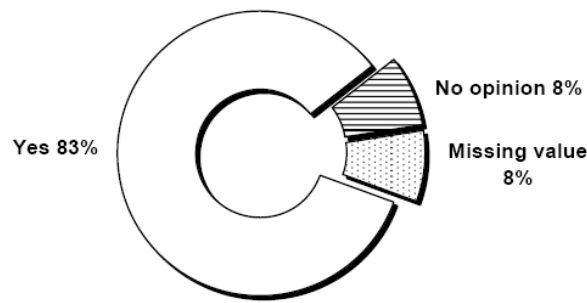


Figure 5-16 Media willingness to run programmes / articles that discuss the negative social and environmental impacts of excessive consumerism, as indicated by media managers

Although a majority of ten (83%) were receptive to discussing consumerism as an issues, as the following quotes illustrate, some pointed out that this was conditional and dependent on newsworthiness:

Possibly, if there was clear evidence that it was having a detrimental effect on our community

If someone, or an organisation, had something to say, we would certainly listen and report on it if worthy.

Yes, if sufficiently newsworthy.

Yes, but, it would be based on readership. And it would depend on what impact it might have on advertisers.

We would have to find it of interest. Or of public interest. We wouldn't be doing it as journalists in a proactive way to say...oh [name of organisation omitted] is a believer in reduced consumerism and we are going to tell you stories about that. It is just wrong editorially, it is patronising, and it is preachy, and we don't want to do any of those things. But we could still do an interesting story on the consumption of plastic diapers for example...[or fuel consumption of different types of vehicles]. We do that. We are not doing it for any great altruistic motive really; we are just doing it because we think that it is information that might be of interest to our viewers. We are not cynical, we are just journalists and we sell advertising.

An assistant editor indicated the various environmental impacts of consumerism her newspaper had covered. She said: "I think we probably have, just looking at landfills, how much rubbish goes in and where people dump stuff and what happens to cell phones and TVs. Over the years we would have done stories." She however confirmed that the social impact of consumerism was something that had not been covered previously.

Media managers were also asked to comment if there would be concerns over potential risk to advertisers and corporate sponsors of their organisations when covering consumerism as an issue. Following a qualitative analysis, their responses were categorised to three levels as illustrated in Figure 5-17. Two editors (17%) said that there would be concerns while one (8%) said that such concerns were likely. One editor explained: "In a small community organisation such as ours, commercial sensitivities are very important."

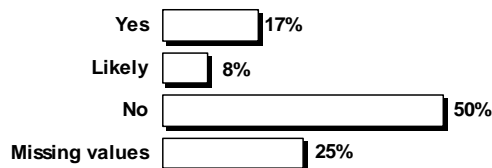


Figure 5-17 Likely concerns over potential risk to advertisers / corporate sponsors when covering consumerism as an issue, as expressed by media managers

Six (50%), on the other hand, affirmed that there would be no such concerns. Their comments illustrate their position:

It's not our policy to decide whether or not to run a story based on whether or not that might be to the detriment of an advertiser

No, I don't see it as a risk. I had no compunction about running a story about a polluting [name of place omitted] business which had a private toxic dump despite the threat to pull his advertising.

No. It would be unlikely to deal with specific advertisers. Advertisers are more likely to be concerned if they are singled out and such ARTICLES would be more generic in nature. Advertisers generally respect editorial independence.

No, we have complete free rein to put in material in the newspaper that we think is interesting and relevant and important. The commercial part and editorial part [of] the business run independent of each other, which is marvellous. It works really well. So even on the same page you might have an ad for the Warehouse...while the editorial content on that page criticises them for bringing in a lot of imported goods.

No. The news and advertising departments work completely separate. And we don't bow to advertisers' demands. We often have people saying, we are advertising in your paper, you can't write that. Sorry...if you want to advertise, you advertise, you know. There is complete editorial freedom.

(iii) Media willingness to discuss the use of psychology in advertising

A majority of media managers in Althoff *et al.*'s study (1973: 670) admitted that "their policies included accepting advertising from known polluters." They suggested that since the media are financially dependent on advertising revenue gained from polluting industries, this may "dilute" media managers' "attacks on the pollution problem" (*ibid*: 670). Because of such financial dependence on advertising revenue, this study proposed the possibility that any "attacks" on advertising as a psychologically manipulative process could be perceived as a sensitive topic among newsmen. To test this possibility, reporters were asked if they believed their organisation would assist in increasing public awareness about the use of psychology in advertising and its impact on adults and children, in order to address the link between advertising and excessive consumerism. Responses are illustrated in Figure 5-18.

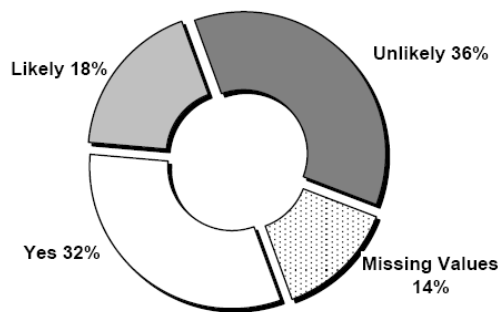


Figure 5-18 Media willingness to assist in increasing public awareness about the use of psychology in advertising and its impact on adults and children, as perceived by reporters

Seven reporters (32%) believed that their organisation would run such articles, while, four (18%) believed that this was likely. In contrast, eight (36%) believed that this was unlikely in their organisations. Some provided the following comments:

...if some visiting professor came to talk about these things we would report it, but telling people how ads work is not our job.

Does not really make interesting reading for the reader and that is what it is all about – making it interesting for the reader.

We would be unlikely to cross the line between advertising and news. Our organisation relies heavily on advertising and it is better to leave it alone.

The advertising pays for the paper. The less ads there are the less space there is for editorial articles. However the advertising department has no input into editorial content and vice versa.

One reporter, who did not select an answer for this question, commented instead: “You’ve presumed there is excessive consumerism here – is that an angle you are running? Not a newspaper’s role.” In a follow-up phone interview, she explained further:

We would run the story if it was newsworthy. For example if someone talked about it, we would run the story. Editorial is separate from advertising, and the fact that advertising is there will not stop us from running a story.

Another respondent who was not able to select an answer for the question, said:

This is a hard question to answer because we are a local newspaper we would not write an article about this unless research had been done locally, or the story had another local link. But this does not mean that if a national story was not written by NZPA or another Fairfax newspaper it would not run it.

Responses provided by media managers were divided to three categories as illustrated in Figure 5-19. Six (50%) said that they would be agreeable to increasing awareness about the use of psychology in advertising and its impacts. However, similar to covering the issue of consumerism, as the following quotes illustrate, they indicated that coverage about advertising would be conditional:

Insofar as it is a legitimate area of public debate, we would carry suitable material on that general subject if it was available. In most situations, that would be a question of reporting the views of those who might speak out about the situation, but at the same time, offering those with contrary views the chance to express those.

We are in business – so we have a responsibility to our advertising clients as well as our reader clients. We would report initiatives of this nature on their news-worthiness at the time.

Probably one off stories, say reporting research findings or campaigns generated by others, such as the Greens.

Yes, if sufficiently newsworthy.

...we would do a story...about subliminal advertising, for example. If somebody came to us and said, you know, that [a particular advertisement was using subliminal advertising]...we would probably do a story on that. Not because we are motivated by any sort of great altruistic drive to... fight about. But [because]... it is a very interesting story, it is a story that people will talk about.

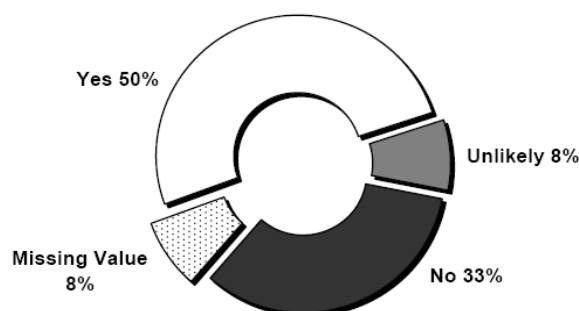


Figure 5-19 Media willingness to assist in increasing public awareness about the use of psychology in advertising and its impact on adults and children, as indicated by media managers

In contrast, four media managers (33%) said that they will not cover the issue. One commented: “We probably wouldn’t unless there was a specific issue, such as a false advertising case. Simply because it doesn’t seem relevant to our readership.” An editor of a newspaper said: “I don’t consider it is a newspaper’s role to indulge in social engineering. How does such an ambition sit with encouraging free and informed debate? Leave it to the government.” Similarly, another newspaper editor said in an interview that his newspaper would not see it as its role. When probed to explain why, he said:

Well, I suppose a newspaper is funded through its advertising, we are a business. We don’t see it as inherently evil. People have their own minds and should make up their own choices. Most advertising in newspapers...there is hardly any psychology in it at all. It is different to television I think. And we don’t particularly see it as an issue and we trust people to be able to make their own minds up.

In response to further discussion about advertising effects on children and families, he said:

...if parents are going to be influenced by their kids moaning about not having the latest play station, I’d say to them, get a spine and say no, if you can’t afford it...So I firmly believe that individuals need to take responsibility for themselves and not blame advertising for their problems.

However, when asked, if he would run articles about the psychology used in television advertising, he said:

Oh absolutely. I think that it is a really interesting topic. If there was an article or issue around it, we would run it if we felt it was interesting. It is not something that comes to mind immediately for us. We’d publish it, no problem. We have run something on psychology of

advertising and advertising methods and how it works and how it doesn't work. Our business section covers those issues all the time.

One assistant editor (8%) said that she was doubtful that her organisation would run such articles. She explained: "We don't want to put people off. I mean you are talking about – perhaps the negative side of people being soaked in, hooked in by advertising..." She, however, added:

We would cover it as a news story. If someone presented a paper at [a University]...we would probably run a story, but in terms of the newspaper educating its readers, no...because we would be biting off the hand that feeds us. But there could be a potential.

When asked if there would be concerns over potential risk to advertisers and corporate sponsors, as a categorisation of their responses in Figure 5-20 shows, two (17%) editors said that they would be concerned, while one (8%) said that such concerns were a possibility.

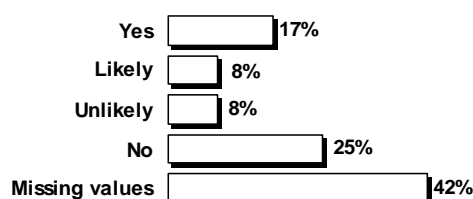


Figure 5-20 Likely concerns over potential risk to advertisers / corporate sponsors when covering the use of psychology in advertising as an issue, as expressed by media managers

One editor (8%) said that it was unlikely "Because usually they [advertisers] can see that reporters report topics of interest. If it's done responsibly they usually don't have quibbles."

Three (25%), on the other hand, said that there would be no concerns. One newspaper editor affirmed: "Editorial independence is vital." Another editor said that this will not be of concern because they were unlikely to deal with any specific advertiser, and that the public awareness raised would be of a general nature. He explained that an advertiser is likely to be concerned only if they were singled out. The third, a news and current affairs producer, responded: "No, no, no, no. If it is a public interest, we don't have any influence from advertisers". When the researcher questioned: "So they can't tell you that you can't run the story because it is going to affect them?" he replied:

Oh God no...If they suggested [that]...it would be a riot...the newsroom...[is] bound to just walk out. Well they wouldn't. They certainly wouldn't. You know, you'd resign before you ever did that. It just breaches every professional, ethical standard a journalist would have.

(iv) Media willingness to take on an educational role in communicating sustainability

Reporters were asked if they believed their organisation would be receptive to taking on an educational role in communicating sustainability issues to the public. Results are presented in the figure below.

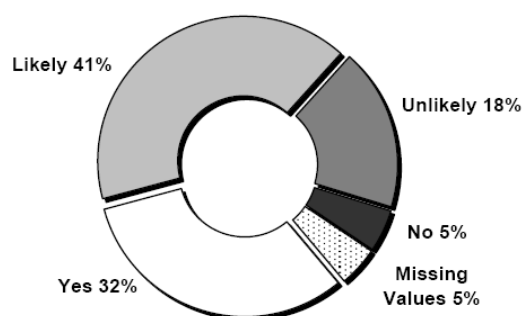


Figure 5-21 Media willingness to take on an educational role in communicating sustainability, as perceived by reporters

Of seven reporters (32%) who indicated a definite ‘yes’, two commented:

We have already done this for kids in a simple way as part of our Newspapers in Education programme.

I believe it already does. Whenever a newspaper reports a sustainability issue, it is educating the public.

One, however, added that this was provided that “readers enjoyed it”. Another pointed out: “...education is only part of a newspaper’s role. People pay to read the newspaper – unlike educational pamphlets which have to be force fed.”

Of the nine (41%) who indicated that such a role was ‘likely’ within their organisations, two commented:

But only if it thought a lot of people would be interested.

It depends; basically newspapers are focused on filling the paper for the next day, which in a small newsroom is really time consuming, due to staff shortages and deadlines. But this is not to say that if someone in the community approached [us] and was prepared to write some articles or provide weekly tips on how people could be more environmentally friendly they would not publish them. It would have to be in a format the editorial team wanted.

One of the four (18%) who indicated that an educational role was ‘unlikely’ explained: “Our role is to communicate news to the community, rather than act as an educational resource.”

One reporter (5%) said that the response would be ‘no’ unless it was a paid-for advertisement. In a follow up phone interview with the researcher, she clarified: “If someone wanted to place an advertisement on recycling for the purpose of educating the public, then we would run it. And we would do an editorial on recycling.”

Media managers’ responses to this question are graphically categorised in the Figure 5-22 below.

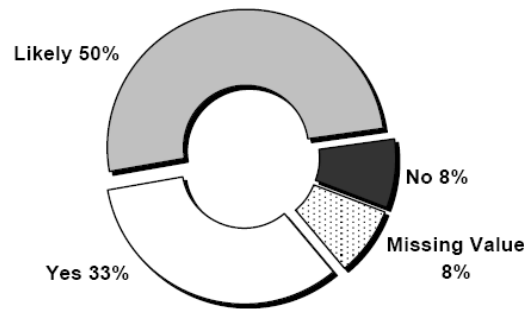


Figure 5-22 Media willingness to take on an educational role in communicating sustainability, as indicated by media managers

Four (33%) were affirmatively receptive to such a role. Six (50%) said that although such a role was likely, it was conditional, as the following quotes illustrate:

We are involved in educating to a large degree through such programmes as NIE [Newspapers in Education] and the reporting of sustainability issues just about every day. [However,] I'm not sure we would need, or want, a formal policy or programme.

...we have an organisation, a department here, we call it Newspapers in Education, we are heavily involved in schools, we have a schools page, perhaps there is a place for some sort of educational role with that department and with our schools page. We also run pages...[on] higher education, once a week – two pages, which looks at research and tertiary organisations.

I think all good journalism has an educative role. [It is]...not just about informing or entertaining, it is also about giving people useful information that they can learn and apply to their lives. So yes, I do think that we could have an educative role, but I think we will always present the balance and...it won't be as an undiluted message that is pro sustainability because it is far more complex than that.

Insofar as there are clear threats to our sustainability, we would be happy to communicate these to readers and seek to educate on them.

[Our organisation]...does support various initiatives, but we do that perhaps with a bit of airtime...Our CEO might have a notion that recycling is an appropriate thing and as a good corporate citizen, with some free air time, might say – we'll play ads for ten minutes, over three nights...[This sends the message that we are]...a good corporate citizen and there is a value in that. So you know it is not total altruism, but [we] would consider doing that and I think [we] have done. Would news and current affairs do that? No.

Representing her editor, a senior journalist (8%) said that her organisation will not be open to such a role. She explained: "We are not an educational organisation. However, we would happily cover another organisation's role in communicating sustainability. Organisations have to make use of the media more – we are a tool there to be used, but are not the driving force."

When media managers were asked to describe the scope of such a role and contents that would be involved, some indicated that it could be covered in personal columns, special sections, features, programmes, or in the case of newspapers – through a 'Newspapers in Education' series. One editor indicated that one way would be to work with the local council, and reporting their sustainability initiatives. Two others specified that they would rely on external sources for contents. One of them said: "...we would probably rely on some form of 'expert guidance'...someone in the

field of sustainability.” Two editors, however, affirmed that the educational contents are unlikely to be in the news or current affairs component. One explained that this was to maintain editorial independence.

Two examples of educative media content that emerged at the time of the writing of this thesis were the awareness raising television series, *WASTED! Waging War on Waste*⁶⁷ aired on New Zealand’s TV3 and *Why We Buy*⁶⁸ on TV1. The series *WASTED* provided recommendations for changes and alternatives that could lead to simultaneous financial savings and reductions in environmental impacts. The first programme of the series (aired 20 February 2007) showed the environmental consequences of disposable baby nappies, and suggested reusable nappies as an alternative. Although no brand names were mentioned, such content is not likely to be viewed favourably by a company selling this product such as Huggies which subscribes to advertisement space on TV3. In addition, this may be perceived as a shift away from the situation described by Shanahan and McComas (1997) that the portrayal of the environment as an issue within television entertainment programmes in the US was separated from lifestyle themes. While *WASTED* was presented in an entertaining fashion, it made explicit connections between environmental impacts and lifestyle aspects such as consumption, consumer decision making and financial savings. The programme has since been compiled in a DVD format to be used as an educational resource. A paperback, titled *Wasted: Save Your Planet, Save Your Money*, based on the show has also been published. Plans are also underway for a second series. The programme has also established an official website⁶⁹ that provides links and further resources for educators, evidencing an educational initiative in association with a mainstream medium.

(v) The newsmen’s response towards the media’s educational role as stated in the United Nations Decade of Education for Sustainable Development implementation plans

Media managers were presented excerpts from the United Nations Decade of Education for Sustainable Development (UNDESD) implementation plans (as cited in Section 2.8.1) that stressed the role of media in sustainability education. They were asked if their organisation had considered any initiatives for the UNDESD. While one did not provide an answer, all others (92%) said that there had been no initiatives. Many also added that they had never heard of the UNDESD before, or that they had not been approached about it.

⁶⁷ This was a weekly programme aired by New Zealand’s TV3 between 20 February and 24 April 2007. The programme inspected the waste production and energy consumption of New Zealand families using the concept of ecological footprint. See www.wastedtv.co.nz for further details.

⁶⁸ This was a six-part series, aired by New Zealand’s TV1. The programme explored shopping behaviour and the psychological strategies that advertisers use to persuade buying. Presented by Simon Morton, the first part of this six-part series was aired on 14 May 2007. See tvnz.co.nz for a synopsis.

⁶⁹ See www.wastedtv.co.nz

Media managers were then asked if there was likely to be any initiatives for the UNDES. Following a qualitative analysis, their responses were categorised into three levels as presented in Figure 5-23.

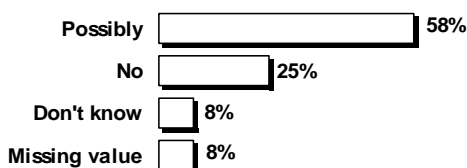


Figure 5-23 Likely initiatives for the UNDES as indicated by media editors

Although many appeared reluctant to say yes, comments provided by seven (58%) indicated a possibility that there would be initiatives, or at least reports about the UNDES; however, this was conditional and dependent on the circumstances. Three, for instance, commented:

There has been no specific contact with my organisation that I am aware of. Should this be forthcoming, we would then carefully consider requests for involvement.

Possibly, on [an] *ad hoc* basis rather than a formal adoption of a programme.

You mean editorially? No. More than enough resources are pumped into the UN. Why would I volunteer to subordinate the independence of this newspaper to be an instrument of the mother of the Kyoto Agreement? We will report [on the] UNDES, where appropriate.

Four, on the other hand, initially indicated that initiatives were unlikely. However, probed further, they expressed a possibility. One newspaper editor said: “Probably not, I’d be surprised.” When the researcher probed, how he would respond if he was approached about it, he said:

Well, I didn’t even know that there was such a thing...which is probably telling you a little bit. And, I don’t think any committee approach or government initiative would have any influence on us what so ever. But if someone wanted to come and talk with me and look at options I would have a really open mind, particularly if it gave us an opportunity to write some really interesting stories.

Similarly, an assistant editor of a newspaper said that it may be taken into account if she was approached with the topic; however, she explained the constraints:

Unfortunately we are an organisation that...we are very comfortable in what we report on a day-to-day basis...[When it comes to] something like sustainability, we would probably write a story because someone has come to us and highlighted an issue that we perhaps need to look at. But it would be quite a...I would imagine...quite a tough sell. You know, we have to think of an entertaining product, we don’t like to be too heavy, too bogged down, we want a good mixture. We have you know...bright people reading our paper, we are always thinking about its readability.

A broadcast media editor’s initial response was:

No. Again because our independence means that we don’t subscribe or sign up to individual causes or causes of action, in the same way as the UN has very strong recommendations on small arms control, or nuclear control. I mean we don’t sign up to that on an educational basis; we cover it as a news event.

In response to the researcher's probing – "But if somebody, say the co-ordinating committee in New Zealand for the UNDESD, came up to you and asked your participation in certain programmes or something, would you be agreeable to that?" – he replied: "I would like to know more details about it; but, I mean if it doesn't challenge our independence or editorial stand, possibly, we would look at it, there wouldn't be a commitment."

Another broadcast media representative said: "[Within] news and current affairs – no we wouldn't support or oppose anything like that. We would report on it, that is all. Simple as that really." In explaining the newsroom situation he said:

...I could go into the newsroom email there, and there is about 200 emails more everyday with attachments of about twenty pages long. I am sure there will be stuff there from the United Nations, I am sure there will be stuff there from the Greens Party...and others, drawing our attention to some of these things. How much weight we put on it, whether we feel it is a story or not, is quite a different decision. There is so much information flowing in here...

When probed further about possible initiatives, he said: "Hard to say. I mean all you do is evaluate the news value of it, its relevance, is there a legitimate public interest in it, and report it. What effect that has, who knows."

In their review of the first year of UNDESD related activity in New Zealand, Chapman *et al.* (2006: 281) reported that "efforts have been minimal and the impacts negligible". Due to lack of funding, the coordination of New Zealand's response to UNDESD had focused on improvements in the communication of sustainability and encouraging sustainability actions. Although one of the priorities of the New Zealand UNDESD Steering Committee was to enhance media capacity to report sustainability issues, as Chapman *et al.* (2006) reported, in this study many media managers indicated that they had not heard of the UNDESD. As many media managers indicated a willingness to consider initiatives, there would need to be clearer communication between the New Zealand UNDESD Steering Committee and the mainstream media sector in New Zealand for any media related objectives to transpire.

The above responses appear to indicate that the mainstream media may be supportive of a *principle of media responsibility in environmental education* to some extent. Many media managers and reporters expressed a willingness to take on an educative role in communicating sustainability. Contrary to earlier suggestions that the media's commercial interests would be an impediment to coverage of S&E issues, a majority of media managers in this study indicated a willingness to discuss the negative impacts of consumerism and the use of psychology in advertising, in order to promote the idea of sustainable consumption. Although a few expressed concerns over the potential impact of such content on advertisers and corporate sponsors, many pointed out that news was independent from advertising. However, remarks provided by some were indicative that the media may not be receptive to a responsibility to intentionally educate because of an underlying belief

that the media’s aim is to reflect public opinion rather than to shape them. This was partially comparable to Goodell and Sandman’s (1973: 45) finding that reporters saw “themselves as largely responding to the public request for information rather than acting as educators or shapers of events.”

5.4.17 Likely causes for increased media coverage of sustainability issues

Reporters and media managers were asked to identify, from a list, the most likely reasons that could cause an increase in coverage of sustainability issues in their organisations. Results are illustrated in Figure 5-24. *Pearson Chi-square tests* showed no significant differences ($p>0.05$) between reporters and media managers for all indicated items. Most reporters and media managers indicated ‘public demand’, ‘increase in sustainability problems or crisis’, and, ‘increase in sustainability related political debate or controversies’ to be the most likely reasons that can cause an increase in coverage of sustainability issues within their organisations. This was in line with Goodell and Sandman’s (1973: 44) observation that in reasoning the increase in media coverage of environmental issues many reporters believed “that the media simply were responding to public demand for more environment news.” Some reporters in their study attributed the increase to the existence of pollution itself and newsworthy events such as speeches by the president and public officials, and dramatic events such as oil spills and demonstrations. In general, Goodell and Sandman found that environment reporters did “not view themselves as opinion leaders or watchdogs on environmental issues” (*ibid*: 44).

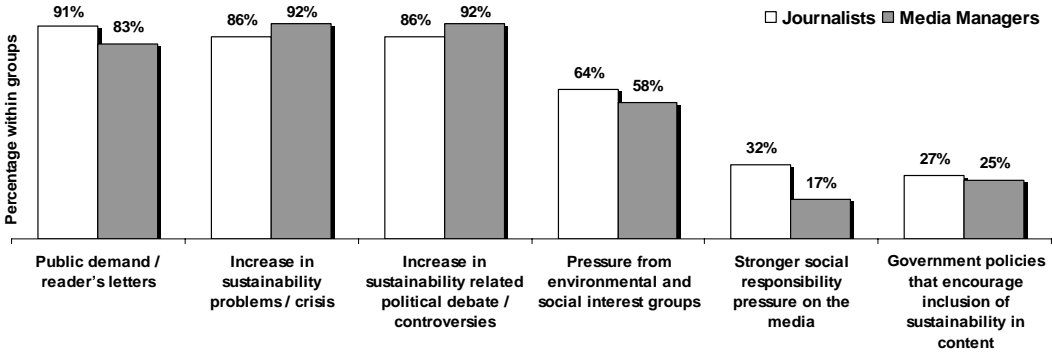


Figure 5-24 Likely reasons to cause an increase in coverage of sustainability issues

In addition to the provided list, one reporter said that “local and new information” would be another factor would cause an increase in coverage. Another reporter commented: “This is tricky because some would have us run stories on peak oil everyday. They do not realise the local and new components of a good news story!” In a follow up phone interview, when asked to clarify who he was referring to, he said:

I meant Greenies and doomsayers. Although peak oil is regarded as the most important issue that is going to effect society at present, I cannot keep writing the same story every day. There

is a theoretical definition of news and that is something that has happened today. News has an element of immediacy to it.

The above remark serves as an example of the lack of understanding of media routines among environmental advocates that Dennis (1991) noted. Even so, many media managers and reporters in this study believed that pressure from environmental and social interest groups was a likely factor that could increase coverage. This differed from Goodell and Sandman's (1973) observation that relatively few reporters believed that increases in media coverage was a result of demands from conservationist groups.

'Stronger social responsibility pressure on the media' and 'government policies that encourage inclusion of sustainability in content' were the least frequently cited factors by both reporters and media editors. One reporter commented: "Not government policies please! Only if we are free to ignore them. An independent press is foundational to a free society. Readers first." He however added: "Sustainability is an important issue and as the public becomes more aware of and involved with these issues, the media will reflect that."

5.4.18 Newspersons' receptiveness towards media policies on environmental and sustainability issues coverage

As detailed in Section 2.8.2, media policies, codes of conduct, or corporate social responsibility aims, concerning S&E issues have been frequently suggested as a step forward to improve media coverage in this area (Chait 2002; Hastings 2004; Michaelis 2001; Musukuma 2002; Peck *et al.* 2004; Porter and Sims 2003) – thereby suggesting a 'social responsibility approach' to achieving the intended improvements. In New Zealand, Spellerberg *et al.* (2006) pointed out that the conception of ethics within the "Code of Broadcasting Practice" has not been extended to environmental care. They argued that since the media have "an 'orchestrational' influence on social norms and behaviours" there was a need for adding "a new 'environmental standard' to the Code of Broadcasting Practice" in order "to eliminate counter-messages" (*ibid.*: 139). These perspectives appear to suggest the need for *media environmental policies* as an explicit expression of media's social responsibility in this area. This is based on the assumption that internal policies of the media on the inclusion of S&E issues within their content could lead to improvements in their coverage of these issues. However, as Figure 5-7 illustrates, in identifying factors that could improve coverage of sustainability issues within their organisations, not a single reporter or media manager in this study indicated 'internal policy or code of conduct to include sustainability in content' to be a factor. In identifying factors that were likely to cause an increase in coverage of sustainability issues, as Figure 5-24 shows, only 32% of reporters and 17% of media managers indicated 'stronger social responsibility pressure on the media' to be a factor.

In an attempt to further understand media views and reception towards such policies, media managers were asked if their organisations had any policies or ‘corporate social responsibility’ aims to include sustainability in content or programming. Two editors (17%) of print media organisations indicated that they did. One, however, clarified that it wasn’t a written policy. The other said the policy was a “part of the wider...organisation” and that he was “not authorised to release such a policy.”

A majority (83%), on the other hand, affirmed that there were no such policies. When asked if there were plans underway for the adoption of such policies, only one newspaper editor (8%) indicated this possibility. She said: “There may be, yup. [But] not at this point in time...there is nothing on the drawing board at the moment”. She added:

You see we don’t really have a policy or a code of conduct. We have a general one for reporters, on...what they should and shouldn’t do. Fairness, accuracy, integrity, you know... look after your contacts and things. But in terms of sustainability in content, no.

Three newspaper editors (25%) indicated that they weren’t aware of any such plans, without any further comments. Another five (42%) indicated that such plans were unlikely, of whom three commented:

As an independent news medium, the organisation does not dictate editorial policy, preferring editorial independence which may (or may not) take in sustainability depending on newsworthiness of specific stories.

I would be most surprised. Again, we do have to be good corporate citizens. We do have to observe good taste and decency and other requirements under the Act and Broadcasting Standards Authority, but beyond that, we would put on what we feel would rate best and, doing never ending stories about environmental and sustainability issues would, I think, be a very quick way to loose a shit load of money. Yeah, so I would be very surprised.

No no. We don’t have policies around news. Our policies are around editorial freedom and independence. So we’d never have a policy on...Highly unlikely. We don’t have any news policies whatsoever. And we work with a free rein, as long as we are covering our community properly and doing good quality journalism. Our policies are more around editorial freedom and independence and quality, accuracy, fairness and balance and things like that.

One broadcast media editor said that his organisation will not adopt such a policy because of the need to maintain editorial freedom. In relation to the questions if the Radio New Zealand / TV New Zealand Charter prompted programming policies relating to coverage of sustainability, he replied: “No, no, no. The charter has just undergone review...public submissions were invited, and sustainability as far as I am aware, did not come up as one of the issues.”

Based the above responses, the ‘social responsibility approach’ of establishing *media environmental policies* for the purpose of achieving improvements to news media coverage of S&E issues appears unviable.

As detailed in Section 2.8, some media organisations have demonstrated a form of ‘environmental social responsibility’; for instance, newsprint producers and publishers in Australia established a *National Environmental Sustainability Plan* (2005) which led to significant improvements to newspaper recycling. In this survey, media managers were asked if their organisation had any policies concerning sustainability for the daily operations of their organisations, such as reductions in energy use. One editor indicated that there was such a policy, but he again said that he was not authorised to release it. Two editors said that they were not sure. The first said, “There will be an official policy but I have never seen it”, while the other said: “Well, I don’t know...I presume there is, [since] they pay for the bins and they pay for the removal of it”.

A majority of 67% (8), on the other hand, said that there was no such written policy. These media managers were asked if there were any plans underway for the adoption of such a policy. Two said that they weren’t aware of any such efforts. Although there were no plans to adopt written policies, six (50%) said that they do practise recycling and energy savings behaviour such as switching off lights, or that there were programmes in place to do so. Three, however, added that such efforts were rather driven by financial imperatives, than by interest in sustainability. These responses suggest that New Zealand mainstream media receptiveness towards an “environmental social responsibility” remains somewhat uncertain.

5.5 Conclusion

The case study in this chapter had set out to explore the ‘social responsibility approach’ to achieving improvements to mainstream media coverage of S&E issues. It was proposed that such a social responsibility might be expressed through a *principle of media responsibility in environmental education* and *media environmental policies*. It was assumed that for improvements to occur via this approach there would first need to be a certain degree of receptiveness from the media organisations towards such a responsibility. Therefore, the main enquiries within this case study aimed to gauge this receptiveness.

Findings suggest that critics may have underestimated the mainstream media’s receptiveness towards an educative role in communicating sustainability. Although a majority of media managers and reporters in this study indicated that sustainability issues are given an ‘average’ priority, many indicated a willingness to take on an educative role in communicating sustainability, shaping sustainable consumption behaviour, and, discussing the negative impacts of consumerism and advertising. Although some expressed concerns over the potential impact such content may have on their advertisers and corporate sponsors, many affirmed editorial independence from advertisers. In addition, it was noted that New Zealand’s TV3 programme, *WASTED! Waging War on Waste*, and TV1 programme, *Why We Buy*, provided examples of such educative non-news media content. However, some respondents in this study were hesitant towards a responsibility to intentionally

educate because of an underlying belief that the role of the media was to reflect rather than to shape public opinion. Some also pointed out that educative content was not possible within news. Therefore, findings in this study were indicative that the mainstream media may be partially supportive of what might be termed a *principle of media responsibility in environmental education*.

While on the one hand, newsmen expressed a willingness to take on an educative role, on the other, an overwhelming majority of reporters in this study did not have related training or educational background in environmental or sustainability issues. Their simplistic definitions of 'sustainable development', their lack of knowledge about 'sustainable consumption' and, the high variation in perceived rounds relevance to sustainability, were suggestive that reporters may not have a deep understanding of sustainability. This may be worsened by the fact that they hold the responsibility of covering several other rounds in addition to the environment, as this means that they are unlikely to have the time to build their knowledge on S&E issues. A high majority of reporters indicated a lack of time to investigate issues to be a problem they faced when covering sustainability issues. It is thus asserted that in order for the media to take on an effective educative role in communicating sustainability, reporters and editors alike would first require related training and education. A majority of both media managers and reporters in this study identified 'training in sustainability issues' as a need for reporters to improve their coverage of related issues. Based on this observation, an indirect connection may be drawn between the currently examined 'social responsibility approach' and the 'educational approach' examined in Chapters 3 and 4. It may be argued that the 'educational approach' when well implemented via mid-career training programmes, as well as through tertiary journalism education, may equip the news media to play a better role in communicating S&E issues and hence fulfill their social responsibility in environmental education.

Although, it was expected that *media environmental policies* might lead to improvements in mainstream media coverage of related issues, this study found that newsmen were largely unreceptive towards such policies. There were no such policies in place in the majority of media organisations, and most media managers indicated that the adoption of such policies was unlikely. This was related to underlying beliefs about the freedom, independence and autonomy of the news media. This finding appeared to indicate that the proposed 'social responsibility approach' via the establishment of *media environmental policies* may not be easily achievable. The mainstream media may require further clarity on the implications of such policies for their establishment; they may first need to be convinced that such policies will not impinge on their autonomy and they may also need to see the benefits of adopting such policies. This appears to be an area that warrants further research as theoretically this approach may be potentially effective in bringing about significant improvements to news media coverage of S&E issues. Furthermore, a publicly expressed 'social responsibility' in the form of official media environmental policies might send a

feedback signal to journalism educators and training providers that there is a need for specialised education in this topic and hence encourage curriculum reform and the organisation of more training programmes in S&E issues reporting; hence, providing an indirect support for the 'educational approach' examined in Chapters 3 and 4.

This chapter also examined newsmen's responses towards related criticisms and issues raised; the constraints within which they operate; and, their needs and requirements in order to improve coverage of S&E issues.

One area of criticism that has been raised in the literature concerns the journalistic norms of 'objectivity' and 'balance.' Balanced reporting, without an evaluation of the 'weight-of-evidence', may result in biased reports, as Boykoff and Boykoff (2004) found in the case of climate change. Williams (2001) suggested that counter-claims in balanced news reports that dispute social problems such as climate change can result in the issue appearing unworthy of attention or unproblematic. Gelbman (2004) argued that the rule of journalistic balance, while it applies to opinions should not apply to facts. He asserted that when it concerns facts, journalistic balance should mean presenting the weight of scientific evidence (*ibid.*). The weight-of-evidence approach thus appears necessary for informative (and thus educative) news reports. However, this study found that only a small fraction of reporters and media managers in this study indicated the necessity to adhere to objectivity and balance to be a problem faced when reporting related issues. One newspaper editor had in fact expressed puzzlement that objectivity and balance were perceived to be problematic. In response to the criticism of a lack of a 'balance' in terms of environmental aspects in motoring and sports journalism, newsmen in this study pointed out that journalistic balance is applicable to only certain types of news reporting. Many noted that it was not necessary to pursue balance in sports or motoring journalism unless an issue arises during an event, in which case, it would be reported independently in the 'news' section. However, considering the multidimensionality of sustainability that cuts across literally all areas of human activity, it is suggested that there may be a necessity for the news media to be more critical in their coverage of sports, motoring, and entertainment and perhaps to intentionally seek the sustainability angles in related news reports. This could be an important contribution of the news media in bridging the disconnectedness between the principle of sustainability and aspects of human living. In general however, findings were suggestive that objectivity and balance were upheld norms of the profession rather than an impediment.

It was also observed that reporters and media managers exhibited varying views concerning the need for evaluation, and there was a lack of clarity with regard to a general stance on evaluation and the 'weight-of-evidence' approach and their implications for journalistic balance. This lack of clarity is likely to remain a cause for concern in environment journalism as it raises questions about news

media's capacity to play an educative role. It is suggested that further research on the implications of 'balance' for environment journalism would be necessary to help clarify the mainstream media's stance, and the uncertainty concerning the application of the 'weight-of-evidence' approach to environment journalism. This would be particularly important as it can inform the design and planning of education and training programmes in environment journalism – hence, improving the 'educational approach' proposed in this research as a means for achieving improvements to news media coverage of S&E issues.

Another problem area identified in the literature concerns journalists' judgement of newsworthiness of S&E issues. This study found some differences in how sustainability proponents' and newspersons' made judgements about newsworthy aspects of sustainability issues. While newspersons made judgements based on traditional news value determinants such as immediate and dramatic events, proponents, on the other hand, tended to regard possible impacts on future generations to be more newsworthy. In addition, in deciding on newsworthiness of sustainability aspects, proponents had a different set of rationales; for instance, impact on public awareness and response. Further studies that comparatively examine newsworthiness of sustainability issues from the perspective of the media, experts, and the public may be necessary to gain a clearer understanding of existing differences, and underlying rationales, in order to inform the process of news construction. Some of the limitations identified in this study may aid the development of future research. A more thorough examination could include examples of news headlines, or sample news stories, to compare journalist and non-journalist (e.g. experts, scientists, advocates, and public) judgement of news story significance. Such comparative research should take into account possible differences between journalists and non-journalists in terms of how they define terms such as 'newsworthiness,' 'source selection' and 'news frames' as non-journalists are unlikely to be familiar with these terms. In addition, a comparison could be made in terms of story angles and aspects to be included in the content of news coverage. The public view would also add another worthy dimension to such research. Such insights would be of aid to the news media in delivering what the public and proponents want in regard to sustainability issues coverage.

Many have also suggested that the media are unlikely to cover contentious issues such as advertising effects and consumerism. However, a recurring statement made by both reporters and media managers alike was that the media would run articles, if it was brought up as an issue by either the public or a member of the scientific community. In line with Goodell and Sandman's (1973) observation, the findings here suggest that the media aim to reflect public views rather than shape it. While the media may find it fairly easy to cover the environmental impacts of consumerism as it relates to already established issues such as pollution and resource depletion, the social impacts of consumerism may be a more difficult area to cover as prevailing public discussions around the issue are at present not prominent. Hence, the responsibility of bringing

forth sustainability issues to the public realm to some degree falls back on the public, sustainability proponents and experts on the topic. Through organised community groups and letters to the editor, the public could initiate discussions concerning sustainability, through the mainstream media. Sustainability proponents and experts, on the other hand, need to be proactive in informing the media of developments and initiatives. This is particularly important considering that a large percentage of reporters in this study identified ‘volunteered contributions from reliable information sources’ as a pressing need in order for them to improve their coverage of sustainability issues. In addition, for effective mediated communication of sustainability, a degree of understanding between information sources and the media would be necessary. By realising media needs, understanding journalistic norms, and appreciating constraints within which journalists operate, representatives of environmental groups and government officials may supply journalists with essential information and facilitate their understanding of intricate issues. This is particularly important considering that, as this study found, they are heavily relied upon information sources.

While the role of the media in communicating sustainability, and their role as a ‘public service’ has often been emphasised, there is a need to question whether it is feasible for the media to take on such a role. Although public service broadcasting would be favourable for mediated communication of sustainability and such a service would include a commitment toward public education, this may not be an immediate option in New Zealand. For instance, Comrie and Fountaine (2005: 101) observe that despite the emphasis given to “social obligations” in the TVNZ Charter, TVNZ “continues to be funded largely by advertising and competes with private companies for public programme funding” (*ibid*: 101). While the Charter requires TVNZ to reflect cultural values, develop citizenship and provide the “information necessary for participatory democracy” funding presently available to TVNZ is “both too limited and too compromised by commercial imperatives” for TVNZ to fulfil these requirements, as it presents the broadcaster with an enormous task of making changes to content while maintaining its commercial income thus increasing the vulnerability of its establishment (*ibid*: 115). Lending truth to Comrie and Fountaine’s observations, in February 2007, TVNZ announced its intent to cut down on staff number. The broadcaster stated that “up to 160 jobs” would be cut “including about 50 from news and current affairs, in the face of falling advertising revenue” (Small 2007: A3). Earlier, Tully (1991) pointed out that a decline in news organisations’ advertising revenue often leads to a reduction in number of journalists employed. He noted that such shortage of staff in the newsroom inevitably leads to decline in news quality and range:

Overstretched journalists become word processors churning out as many stories as they can under great pressure which generates physical and emotional stress. Their professional integrity is compromised as they write stories they know to be inadequate and superficial. There just isn’t time to produce the backgrounders and features which put issues in context and answer that crucial question, “What does it all mean?” (*ibid*: 1).

Therefore, the mainstream media's commercial constraint and its implications for S&E issues reporting are likely to continue to be a contentious point of debate. While it is arguable that the lack of full-time environment reporters may be indicative of the mainstream media's stance towards the topic, this lack is also likely to be, as several reporters in this study pointed out, due to the size and resource constraints of the media organisation.

The observations made by Comrie and Fountaine (2005), in a way, point to government responsibility in materialising feasible public service broadcasting in New Zealand, through which the broadcast media sector would be able to play a more significant role in communicating and educating for sustainability. Governmental support may lead to a broadcast environment that is less dependent on commercialism and more capable of representing public interest. As Spellerberg *et al.* (2006: 145-146) have proposed – New Zealand television broadcasters need to “reflect the community's widely held interest in environmental stewardship and sustainable development” by “avoiding negative counter-messages” such as “programmes or adverts which simply ‘accept’ or even trivialise irresponsible attitudes or behaviour towards our environment and its resources.” Their recommendation for the addition of a 12th Standard that addresses environmental care to the present 11 Standards within the Code of Broadcasting Practice may also become more feasible this way.

In brief, findings in this case study indicate that the mainstream media may be somewhat receptive towards a *principle of media responsibility in environmental education*. They even expressed a willingness to cover contentious topics such as advertising and consumerism. Therefore, the mainstream media's reluctance to carry such content should not be presumed as it often has been in the past. They were, however, unreceptive to the idea of establishing *media environmental policies*. Despite this unfavourable response, this ‘social responsibility approach’ is one that requires further inspection because theoretically this approach appears to be a potentially effective way for bringing about substantial improvements to news media coverage of S&E issues. Furthermore, this approach has the potential to indirectly support the ‘educational approach’ examined in the case studies in Chapters 3 and 4. These case studies found that although, such training and education appeared capable of enhancing journalists' knowledge about and interest in reporting S&E issues, whether or not such enhancements led to final outputs in terms of increased and improved news reports about these issues appeared dependent on editors and media decision makers. Hence, it may be argued that there is a strong connection between these two approaches – a stronger environmental social responsibility on the part of the mainstream media might ensure that journalists trained and educated on S&E issues are provided an enabling situation to put into practice what they learned. Such a social responsibility, when publicly expressed, might also encourage a more significant provision of related education and training for journalists to meet media needs. Still, in a general sense, this case study found that the mainstream news media are in fact limited in their capacity to

play an educative role in their communication of S&E issues because of their need to adhere to the journalistic norms of objectivity and balance, their judgements of newsworthiness of related issues and their traditional definition of news which appears to state that news cannot be purposefully framed to be educative. The following case study in Chapter 6 proposes the engagement of alternative news media that are not constrained in this way for the purpose of enhancing public awareness about S&E issues through strategically framed mediated messages. Chapter 6 thus provides an exploration of the last approach to improvement proposed in this research – i.e. the ‘message framing approach.’

Chapter 6

Impacts of a Strategically Framed Information Campaign on ‘Sustainable Consumption’ implemented in the Alternative Media: An Exploration of the ‘Message Framing Approach’

“When the legislator has once regulated the law of inheritance, he may rest from his labour. The machine once put in motion will go on for ages, and advance, as if self-guided, towards a given point. When framed in a particular manner, this law unites, draws together, and vests property and power in a few hands: its tendency is clearly aristocratic.”

(De Tocqueville 1839: 44)

6.1 Introduction

In assessing the formation of the American democracy in the mid-1800s, De Tocqueville (1839) observed the power (although detrimental in the above case) that legislation can accrue when framed in a particular way. Of such legislation, he wrote: “Through their means man acquires a kind of preternatural power over the future lot of his fellow-creatures” (*ibid*: 44). Hence, the idea of influencing others via strategically framed messages is far from new.

While the ‘message framing approach’ appears to have been widely used in political campaigns (Nelson, Oxley and Clawson 1997), and in the field of health communication (e.g. Jenner *et al.* 2005; O’Keefe and Jakob 2007; Rothman *et al.* 1993; Rothman and Salovey 1997; Salovey and Williams-Piehot 2004; Wilson *et al.* 1988), the review for this research, as detailed in Chapter 2, found that it is only beginning to be considered for the purpose of improving mediated messages about sustainability and environmental (S&E) issues (e.g. Davis 1995; Pelletier and Sharp 2008). As introduced in Chapter 1 of this thesis, such lacks in enquiry have remained despite the many concerns expressed over the lack in public understanding of sustainability which was regarded to be essential for gaining public support towards related initiatives. Therefore, this research proposed the ‘message framing approach’ of drawing from effective and persuasive communication theories to strategically frame messages as another method that might be employed to achieve improvements to mediated communication of S&E issues in addition to the ‘educational approach’ examined in Chapters 3 and 4 and the ‘social responsibility approach’ examined in Chapter 5. The ‘message framing approach’ appears important when we consider the difficulty, that Day (2000) observes, of harnessing the power of the media to inform and change public opinion on environmental matters. He pointed out that in some societies people are barraged with over 3,000 commercial advertisements in a day, making it difficult for environmental messages to stand out. In addition, the environment as an issue also competes with a range of other social issues such as

crime, unemployment, poverty and health (Anderson 1997). Therefore, it becomes crucial that S&E messages are strategically framed so that they are noticeable in the midst of other information.

This research also proposed that the engagement of alternative media channels would be necessary for the implementation of strategically framed information campaigns on sustainability, a free expression of perspectives and views about sustainability, and discussion of related issues at a deeper level, that may not be feasible in the mainstream news media. As we saw in Chapters 3 and 4, in spite of their acquired knowledge on S&E issues through education and training, reporters' ability to cover related topics was largely dependent on their editors and the norms of their profession. Although S&E issues have relevance to almost all areas of human activities, the seeking of a 'sustainability news angle' appears not to be a norm in mainstream media news reporting. As the case study in Chapter 5 revealed, although mainstream media representatives were receptive to an educational role in communicating sustainability, journalists still resorted to traditional determinants of news when judging the newsworthiness of related issues – this means that issues that do not meet news value criteria may remain inadequately covered. Conventional definitions of news also prevent the employment of persuasive communication or even educative communication – forms of communication that are necessary for encouraging social change. Moreover, the mainstream news media are less likely to initiate investigations of contentious topics such as the social impacts of advertising and consumerism on their own accord. As indicated by several newsmen in the preceding case study, such a topic would first need to be brought up as an issue in the public arena for it to be deemed newsworthy. Conversely, alternative media channels offer an arena for the discussion of such issues with lesser qualms. As detailed in Section 2.14, many noted the potentials of alternative media since they provide the space for alternative perspectives that are not covered in the mainstream media (e.g. United Nations 2004; Ryan 1991; Howley 2007; Collins and Rose 2004; Rodriguez 2000). However, it was observed that very little academic research has focused attention on alternative media as channels for sustainability communication.

In light of the above, it was proposed that effective mediated communication of S&E issues might be achieved through a strategically framed information campaign⁷⁰ implemented through an alternative news medium. To test the viability of the 'message framing approach', an information campaign on the topic 'sustainable consumption' was designed based on available theories and recommendations for effective and persuasive communication, and implemented through the *St Albans Neighbourhood News*, a community newspaper in Christchurch, New Zealand. The campaign purposefully selected 'sustainable consumption' as its key topic considering its importance as a sustainability concept that offers viable solutions to the present day problem of

⁷⁰ As has been detailed in Section 1.5, the *information campaign* designed for this study is differentiated from *communication campaigns* which are generally wider in capacity and objectives. This study undertook a modest information campaign that was limited in scope and was targeted to impact on individual knowledge and attitude, rather than to trigger behavioural or social change.

unsustainability and the apparent neglect of its discussion in the public arena as has been discussed in Chapter 2. The three key objectives of the campaign were to enhance awareness about the environmental and social consequences of consumerism; enhance understanding about the meaning of 'sustainable consumption'; and, enhance awareness about the use of psychology in advertising to create consumer demand for non-need items. A *controlled quasi-experiment* was employed to evaluate the impact of the campaign on sixteen dependent variables in relation to the three key objectives. At the time of the writing of this thesis, no previous studies were identified that had examined how an information campaign on sustainable consumption affected community understanding and views in New Zealand or elsewhere.

6.2 The state of New Zealand's sustainability: A Review of Literature

A review of literature affirmed the relevance of an information campaign on 'sustainable consumption' to New Zealand. New Zealand's large ecological footprint⁷¹, its current trend towards a materialistic and consumerist lifestyle, and consequent environmental and social problems, pointed to 'sustainable consumption' as an urgent need within New Zealand society. Sustainable consumption practices were regarded necessary to ensure the country's long term environmental, social, cultural and economic sustainability.

6.2.1 New Zealand's large ecological footprint, its high levels of consumerism and its consequent environmental and social problems

One indicator of high resource consumption in New Zealand was its large ecological footprint. *The Living Planet Report 2006* placed New Zealand among the top ten in the list of countries with the highest ecological footprints (Hails *et al.* 2006). According to the report, in 2003, with a population of 3.9 million, New Zealand had a total ecological footprint of 5.9 global ha/person. To point out a difference, during the same year, Central African Republic with a similar population size of 3.9 million had a total ecological footprint of 0.9 global ha/person.

Although internationally, New Zealand is perceived to be a developed nation with a large ecological footprint, local interpretations of the country's ecological footprint appeared to be somewhat contrary. For instance, a report by the country's Ministry for the Environment noted that the apparently high per capita ecological footprint in some regions in New Zealand, can be

⁷¹ As defined by Wackernagel and Rees (1996: 3) the Ecological Footprint concept "accounts for the flows of energy and matter to and from any defined economy and converts these into the corresponding land/water area required from nature to support these flows." "By revealing how much land is required to support any specified lifestyle indefinitely, the Ecological Footprint concept demonstrates the continuing material dependence of human beings on nature...the Ecological Footprint of a city will be proportional to both population and per capita material consumption. Modern cities and whole countries survive on ecological goods and services appropriated from natural flows or acquired through commercial trade from all over the world. The Ecological Footprint therefore also represents the corresponding population's total 'appropriated carrying capacity'" (*ibid*: 11).

“explained away” as a result of low land productivity in those regions (McDonald and Patterson 2003: xv). The report reasoned out that because low land productivity meant more land was needed to produce the same amount of product, per capita footprint becomes exaggerated. For instance, although the report listed Canterbury to be a region with the second-highest ecological footprint in New Zealand, it also described that Canterbury had “more than enough land to sustain its current level of consumption” and that “Canterbury would [in fact] need to increase its consumption, 2.09 times before it would overshoot the availability of useful land” (*ibid*: 133). According to the report, “in net terms, this means that Canterbury is self-sufficient and actually has an ecological surplus of 1,898,230 ha of useful land” (*ibid*: 133). The report also considered New Zealand to be one of the few developed countries living within its carrying capacity.

Although the above assessment is received, it is arguable that understated ecological footprints, and overstated ecological surplus, may hinder progress towards sustainability. To imply that ecological surplus means available room for increased consumption, may be considered to be risky communication, as this may lead to the dismissal of accelerating consumption levels as a problem in New Zealand. An earlier report by the Ministry for the Environment, *The State of New Zealand's Environment*, had in fact suggested the need for sustainable production and consumption practices in New Zealand. The report stated:

New Zealand's production and consumption patterns have resulted in a large ecological footprint based primarily on extensive land use, but also on the waste-absorbing properties of our water and air...So far, the small size of the New Zealand population and the relatively large land area and water resources at our disposal have allowed us to have our environmental cake and eat it too. In effect, the environment, particularly the indigenous wildlife..., has partly subsidised our economic development by providing a succession of quarried resources and plentiful energy resources to use, and abundant land, water and fresh air to absorb our wastes. However, those subsidies cannot be sustained indefinitely and will eventually be reduced or withdrawn if we cannot manage our activities sustainably (Ministry for the Environment 1997: 45).

Another indicator of a high resource consuming country is signs of materialism and consumerism within its society. In Ger and Belk's (1996) cross-cultural study of materialism, although presented as provisional, New Zealand was the third most materialistic of a list of twelve countries. Lawson *et al.* (1996) noted that ‘possession rituals’ or the transference of the ‘meaning’ in goods to consumers through acquisition, were evidently strong in New Zealand – reflecting the degree of materialism in its culture. Furthermore, Lawson *et al.* found that New Zealanders of Anglo-Celtic origins tended to place greater emphasis on ‘tangible’ gifts and the monetary value of such gifts, compared to “other groups who may exchange time in preference to actual goods” (*ibid*: 70-80).

Materialism may be increasingly becoming a norm in New Zealand society. Todd *et al.* (2001) noted the emergence of a new lifestyle segment in New Zealand society which they termed *young pleasure-seekers*. Comprising 13.5% of the New Zealand population, this population segment consisted of individuals who were young, living for the moment, and devoted to hedonic

consumption. Exhibiting a high level of materialism, this group believed that they can be happier if they had the financial means to buy more. Their shopping habits were also described as somewhat irresponsible:

Members of this group are more likely to have bought something to make themselves feel better, spend any money left at the end of the pay period, make only minimum credit card payments and written cheques knowing there was not enough money to cover them. They agree that others would be horrified if they knew of their shopping habits, and also indicate that they have thrown away products that are still useful, with little agreement that they re-use items (*ibid*: 18).

In a subsequent study, Lawson *et al.* (2006) expanded the above population segment to include individuals up to mid-40s in age range. Representing 13.8% of the population, this segment was described as being materialistic, living for the here and now, with little concern for political or social issues, and “unconcerned with ideas like spirituality, politeness, tradition, social justice, the environment, obedience and helpfulness” (*ibid*: 15). In addition, they were described as being supportive of commercialism and consumerism:

Pleasure Seekers like advertising and do not agree that it should be restricted to children or that there is too much sex used in advertising to sell products. Overall, they describe themselves as being incautious shoppers who like to try new products. They are not careful with money and they appear to be unwilling to save. Not surprisingly, frugality is not a characteristic of this segment, members of which express a strong liking for credit cards and are also likely to have a range of loans (*ibid*: 15)

Despite such indicators of consumerism in New Zealand, the country’s sustainability is sometimes presumed because of its low population density. Goldberg (2001) noted that the need for sustainable development in New Zealand is sometimes contested on the grounds that New Zealand is different from other northern countries that are highly populated and intensely industrialised. A report by New Zealand’s Ministry for the Environment (McDonald and Patterson 2003), commented that the United States, Denmark, Ireland and Australia had higher adjusted per capita ecological footprints compared to New Zealand, and reasoned that the larger footprints of those countries were due to higher income levels and higher levels of material affluence and consumption. New Zealand’s Parliamentary Commissioner for the Environment, however, debated that although culture in New Zealand may be regarded as different from that of United States or Britain, consumerism is now central in the lifestyle of its society and pointed out that New Zealand is part of the “same international trading system that has been structured around consumption” (PCE 2004: 114). Further evidencing increasing consumption levels, Statistics New Zealand reported that there has been a steady increase in consumption of goods and services by New Zealand households since 1988 (Statistics New Zealand 2002). The New Zealand Institute of Economic Research Inc. reported that total retail sales had reached \$5.8 billion in 2004, which was an increase of 8.1% from year 2003 (NZIER 2005).

Increases in consumption levels often lead to consequent environmental problems such as increasing levels of pollution and more noticeably, growing amounts of waste deposits to landfills.

Recent analysis by the National Institute of Water and Atmospheric Research indicated that the water quality of over 80% of urban and pastoral streams in New Zealand exceeded the recommended levels for ammonium, oxidised nitrogen and dissolved reactive phosphorus (Larned *et al.* 2004). This means that these streams are unsafe for swimming or drinking although they may appear clear (*ibid.*). Waste has been regarded to be a serious problem that is worsening, although data on growth rate of this problem is lacking (Ministry for the Environment 2002; PCE 2004). Changes in technology and lifestyles have resulted in the development of a throwaway society in New Zealand (PCE 2004). It has been estimated that New Zealanders generate over 3.4 million tonnes of waste that is disposed into landfills each year (Ministry for the Environment 2002). In Auckland, where waste generation has been monitored since 1983, solid waste generation increased six times as much as its population growth over the last twenty years (PCE 2004). According to the Christchurch City Council (2006) there has been a sharp increase in waste generation since 2003, parallel with strong economic growths.

In New Zealand, although there are a variety of ongoing initiatives by community groups, businesses, local government, and the central government in addressing the waste issue, these activities remain focused on the bottom tip of the waste hierarchy (PCE 2004). Similar views were also indicated in the *New Zealand Waste Strategy* which stated:

We are making good progress in managing waste disposal but little in reducing waste. Forging a path towards sustainability means finding ways to break the link between development and environmental degradation. Reducing environmental stress means not only reducing the waste we generate but also changing the way we think about our use of resources (Ministry for the Environment 2002: 2).

Since a large portion of waste is generated at the production phase of a product, recycling efforts alone are not enough. As has been established in Section 2.2 of this thesis, there is a need to address the underlying factors that cause generation of such amounts of waste in the first place. One major underlying factor is consumerism – as has been pointed out by the Parliamentary Commissioner for the Environment in their report, *See Change: Learning and education for sustainability* (PCE 2004).

A consequent social problem resulting from excessive consumerism and materialism is debt. Increasing use of credit cards and increasing debt are evident in New Zealand. Feslier (2006) observed that following financial deregulations in the 1980s, New Zealand has seen a rapid growth of complex financial products which has led to increases in borrowing and credit card use. “If current trends in household consumption and debt are anything to go by, the development of a consumer society in New Zealand may even be accelerating” (PCE 2004: 113). While the easy availability of credit has consequently increased levels of borrowing, debt levels that exceed income leads to financial trouble and vulnerability to rises in interest rates (Valins 2004). Eighty percent of food bank users in New Zealand have reported to be in debt and many have indicated

debt to be a reason for their inability to cope financially (Wynd 2005). Such patterns in borrowing and debt may inevitably lead to social unsustainability.

In addition to environmental and social sustainability, sustainable consumption is necessary for the nation's economic sustainability. New Zealand's tourism industry, for instance, relies on the country's natural environment to attract tourists. According to Gautier (2003), New Zealand's most important brand values that companies can rely on in international marketing strategies include themes such as 'nature' and 'clean'. Sustainable consumption practices are therefore desirable if this 'clean and green' image is to be sustained.

6.2.2 Advertising and its effects in New Zealand

There have been some concerns raised over the role of advertisements in the shaping of a consumer society in New Zealand. Representing New Zealand's Parliamentary Commissioner for the Environment, Selby-Neal (2002: 6) stressed that education for sustainability would need to address the pervasiveness of advertising and the mass media because, of their influence on "human values, fears, expectations and desires – those things that consciously and sub-consciously drive hearts and minds, and influence what we care about, what we take responsibility for, and ultimately what we do." Selby-Neal added that because of the volume and constancy of advertising messages, they do have an influence on consumer choices and decision-making. Although advertisers often claim that they are merely providing information to enable consumers to make informed decisions, the more "pervasive forms of modern advertising, especially those used on television, aim to influence and persuade people instead of informing them" (PCE: 100). Such advertisements are designed to use emotion to form connections between people and product brands (*ibid.*). Day (2000) refers to this connection that advertisements make as 'irrelevant motivators.' He explained:

An irrelevant motivator is something that motivates the consumer to buy the product, but it is not related to the product. This motivator is connected to a "need state" of the potential customer. Some universal human need states are for status, sexual attractiveness, or being a good parent. The advertiser suggests that buying this product...will fill this need (*ibid.*: 82).

Contrary to Crook's (2004) argument (as detailed in Section 2.2.3), observation of present-day advertising in New Zealand shows that the use of consumer psychology in advertising is on numerous occasions akin to those described by Packard (1957) as 'hidden persuaders'. For instance, although greed is regarded to be a powerful appeal, Dichter (1986: 28) advised that advertisers need "to be very careful not to name this appeal by its proper designation". Dichter advised that this appeal should instead be disguised when presented to the consumer – for instance, it could be presented as a way of economising or dealing with inflation. Evidencing this form of 'covert' communication, a billboard advertisement by New Zealand's PAK'nSAVE supermarket on display in 2006, had used the tag line 'Be an economist' – which may be interpreted as a hidden

message appealing to consumers' liking for low prices in a rather glorified way. Such an appeal may be described as 'covert' or 'hidden' considering that it is not directly evident.

Cohan (2001: 324) regarded advertising in itself to be "neither morally good nor bad", however the techniques that some advertisers use is ethically debatable. Packard (1957: 258) questioned the morality "of manipulating small children even before they reach the age where they are legally responsible for their actions", and the morality of cultivating within the public "an attitude of wastefulness toward national resources by encouraging the 'psychological obsolescence' of products already in use". These two aspects of morality in advertising that Packard raised, were addressed in this study's information campaign on sustainable consumption.

In New Zealand, advertisements using children are noticeably abundant and some resultant negative effects have been observed. In an Auckland-based pilot survey, De Bruin and Eagle (2000: 5) found that most parents and guardians of children aged 5-12 agreed that television advertisements encouraged "children to want products they do not need...and [that] there [were] too many advertisements in television programmes directed at children." In a another New Zealand-based study, Utter *et al.* (2006: 606) found "that longer duration of TV watching (thus, more frequent exposure to advertising)" had a significant influence on the frequency of consumption of commonly advertised food, such as soft drinks, sweets, snacks, and fast foods among children and adolescents, and thus contributing to rises in obesity.

Observably children were also portrayed in advertisements for products irrelevant to children such as sports utility vehicles (e.g. Hyundai Sante Fe) and mobile phones (e.g. Telekom) in New Zealand. Such use of children in advertisements may be viewed in light of what Bowler (1997: 8) referred to as "adultizing" children, where visual images in television place children "in a context of adult activities and relationships that project on to the child adult status in terms of thinking, motives and sexuality." Describing New Zealand TV advertisements in which children had been depicted in this way, she said:

It would be charitable to think that such advertisements issue from ignorance of the fact that childhood and adulthood are qualitatively different stages of the life span. However ignorance and the profit motive are not sufficient defence when we consider the well-known role-modelling potential of television...(*ibid*: 8).

There is reason to believe that the use of children in advertising may in fact be purposeful. Gorn and Florsheim (1985: 962) found that adult product commercials "can influence children's perception of the products and brands that are associated with being an adult and thus perhaps the products and brands they should consume in the future." Hamilton and Denniss (2005: 49) noted that when advertisers became aware of an industry estimate indicating that a large percentage of parents' purchases of cars were influenced by children, in the following years, "ads for products usually chosen by adults began to be targeted at children."

Conversely, Bergler (1999) argued that in contrast to popular belief about children's vulnerability to advertising, children were in fact careful with money, were able to question the credibility of advertising even at age six, and were not influenced despite advertising's attractive messages. In contrast to Bergler, in a study of children's perception of advertising in New Zealand, Bulmer (2001) found that although children's awareness about commercial intent of advertisements increased with age, they were influenced by advertisements.

Bergler (1999) put forward that children's exposure to television advertising was exaggerated and he argued that the influence children had over parents' purchase decisions was overstated, because in most instances, "the advertising for products seen by children does not result in them getting their own way" (*ibid*: 417). However, what Bergler failed to include in his report were the indirect effects of advertising on children, for instance, the psychological and emotional consequences of repeated exposure to messages about desirable things they can't have. Although Bergler noted that purchase decisions often result from "discussions and conversations as well as arguments between parent and child" (*ibid*: 417), he did not recognise the resultant 'arguments' as a negative consequence of children's exposure to advertising. A review of research by Buijzen and Valkenburg (2003) found evidence that advertising aimed at children did result in unwanted impacts within families such as increased conflict between parent and child, and materialistic and dissatisfied children. Exposure to advertisements leads to increased purchase requests from children, which leads to an increase in the frequency of parents' denials, which then causes the parent-child conflict (*ibid*.). In addition, Hamilton and Denniss (2005: 55) observed that

to create a desire for a cool new product, the marketer must first engender discontent among children who do not have the latest toy, sports shoe or breakfast cereal. Then they must convince the children that their lives will be better if they consume more. The result of this process is a generation of children who are fatter, more materialistic and more beset by behavioural problems than any generation that has preceded them (*ibid*: 55).

However, Bergler (1999) emphasised that the onus was on parents to teach their children to handle the media and to be responsible for their own actions. Linn (2004: 375), on the other hand, argued: "Given the intensity and pervasiveness of marketing to children, it is either cynical or naïve to assume that individual parents should bear the sole burden of shielding children from the potentially harmful effects of a \$15 billion industry." She contended that "the intensity and frequency of children's current exposure to commercial messages is unprecedented" and is beyond parents' capacity to monitor or control (*ibid*: 367).

Advertisements that encourage "psychological obsolescence" of products and wasteful behaviour as described by Packard (1957) were also evident in present-day advertising in New Zealand. For example, a television commercial by Freedom Furniture (a New Zealand furniture company) aired in 2005, pictured a woman kicking away an old chair because she now had the option to purchase new and trendy furniture. In the same year, a commercial by Westfield Mall in Christchurch,

pictured a women disposing of her clothes in a clothing bin to make wardrobe space for new clothes.

Advertisements and lifestyle programmes also hold the potential to enhance social unsustainability within a society. Lawson *et al.* (1996) observed that ‘social class’ does exist in New Zealand regardless of the resentment or discomfort some may express towards the term. They describe ‘social class’ as a form of social inequality or social stratification, that is based on “economic differences between groups; that is, inequalities in the possession and control of material goods” (*ibid*: 136). Since ‘social stratification’ exists in New Zealand, luxury product commercials and depictions of lavish lifestyles in New Zealand media, are likely to cause similar negative social effects on youth and poorer communities (such as feelings of deprivation and social class inadequacy), as has been recorded in countries like India (Vilani 1989) and Brazil (O’Dougherty 2002). “Many New Zealanders, gazing through their television screens at American programmes each night, may also wish to simulate the idealised pictures of an American lifestyle for themselves” (PCE 2004: 114).

Drawing from the above, it may be argued that the use of children in advertisement may contribute to the materialistic and consumerist world view of upcoming citizens, and thus to the continuance of unsustainable patterns of consumption in New Zealand. Advertisements that encourage the consumption of non-need items and portray wasteful behaviour as acceptable, and those that enhance social stratification – may be perceived as an antithesis to the principles of sustainability. This research thus proposed the importance of drawing attention to the use of consumer psychology in advertising, in order to make the connections between advertising and unsustainable consumption patterns. Even when advertisers make their commercial intents obvious, the use of consumer psychology in advertising may remain unapparent. Some of the above observations were included in the designed information campaign to enhance awareness about the effects of advertisements on children and on society.

6.2.3 Sustainable consumption: A lack of public awareness in New Zealand

Exploratory findings indicated the possibility of a lack of public awareness about the concept of ‘sustainable consumption’ in New Zealand. Discussions with local sustainability proponents and practitioners pointed to the possibility that the term ‘sustainable consumption’ has rarely appeared in New Zealand media. A general data base search using Factiva (an electronic database by Dow Jones), conducted early 2005, found no articles containing the term ‘sustainable consumption’ in New Zealand newspapers. Similarly, web-searches using Google’s search engine (www.google.co.nz), during the same period, resulted in very limited hits for websites in which the term ‘sustainable consumption’ was associated with New Zealand. A data base search for thirteen

New Zealand newspapers⁷², using Factiva, dating back two years, on 17 November 2006, reaffirmed that no articles containing the term ‘sustainable consumption’ were published during this period. It was found that government documents as well rarely contained the term ‘sustainable consumption.’ For example, a search in the Ministry for the Environment’s website (www.mfe.govt.nz) for the term ‘sustainable consumption’ on 16 November 2006 resulted in only 4 hits – all related to ‘sustainable consumption and production’ as a subject area. Based on these exploratory findings it was assumed that public understanding of sustainable consumption in New Zealand would be negligible.

6.2.4 Sustainable consumption: A lack of explicit policies in New Zealand

The need for sustainable consumption has increased significance in the global political agenda. In Europe, the OECD Environment Directorate established a *Work Programme on Sustainable Consumption* with the intent to support OECD country efforts in reducing the environmental impacts of household consumers (OECD 2001), and has since established policy guidelines to promote sustainable consumption (OECD 2002). In the final workshop of the *Life Cycle Approaches to Sustainable Consumption Project* in February 2005, scientists proposed the *Oslo Declaration*⁷³ which emphasised the urgent need for sustainable consumption and its implementation. The need for sustainable consumption has also been emphasised at an international level by UNEP’s *Sustainable Consumption and Production Programme*⁷⁴. Although an earlier UNEP news release reported slow progress in implementing the guidelines (UNEP 2002), more recently, Parris (2005) noted that countries such as the United Kingdom, Finland, Norway and Canada have come up with explicit government policies to address sustainable consumption.

In this study, however, exploratory findings indicated a lack of explicit policies on sustainable consumption in New Zealand. Although a report titled *Indicators of Sustainable Consumption: Messages for Policy Makers* by E. Goldberg was indicated in the website of Statistics New Zealand, it was not possible to review this report as it was not accessible for public viewing⁷⁵.

⁷² Dominion Post, Manawatu Standard, New Zealand Herald, Otago Daily Times, Sunday Star-Times, Taranaki Daily News, The Dominion, The Evening Post, The Nelson Mail (New Zealand), The Press (Christchurch), The Southland Times, Timaru Herald and Waikato Times.

⁷³ Further details of the Oslo Declaration may be found in its website – www.oslodeclaration.org.

⁷⁴ Clark (2006) provides a review of UNEP’s initiatives in this area. These include the Sustainable Consumption Guidelines within the UN Guidelines for Consumer Protection in 1999, other policy guides, forums and related publications.

⁷⁵ The report was listed in Statistic New Zealand’s website, www.stats.govt.nz/analytical-reports/monitoring-progress/consumption-resource-use/references-and-further-info.htm. To the author’s request for the report an email reply from the Publishing Administrator of Statistics New Zealand on 25 September 2006 indicated: “The report was an internal consultant report prepared for Statistics NZ by E Goldberg. It is not available to the public which is why it is not available for download.”

However, a review of other available materials revealed that although New Zealand had several strategies, policies, and legislation that implicitly promoted sustainable consumption such as the *Resource Management Act 1991*, *NZ Waste Strategy*, *Energy Efficiency Strategy*, *Fisheries Act 1996* and the *Sustainable Land Management Strategy* (UNDESA 2005), there were none that addressed sustainable consumption in an explicit manner. Goldberg (2001) noted the limitations of existing New Zealand legislations such as the *Resource Management Act* in achieving sustainable development. He suggested that

it may be too much to expect legislation aimed at the sustainable management of natural resources to deliver sustainable development. Laws that i) are effects-based and do not address causes, ii) leave the “business of business to business” and iii) only occasionally intervene in the life of...[business organisations], will probably not be able to firmly anchor the sustainable development paradigm in the minds of decision-makers in business and other organisations (*ibid*: 9).

Building on Goldberg’s point, it appears conceivable that the lack of sustainable consumption policies in New Zealand may be a result of the country’s emphasis on business and economic growth. As noted by the PCE (2004), the growth of commercial enterprises in New Zealand has seen increases in efforts to induce growth in public consumption. Businesses often “co-operate with or pressure governments to create conducive conditions for increasing consumption” (Sanne 2002: 273). In New Zealand, government policies have tended to be supportive of such efforts because of perceived economic benefits and employment opportunities (PCE 2004). Hence, as explained in Section 2.4, a certain amount of reluctance towards embracing sustainable consumption policies may be expected at the national level, because such policies often mean addressing the sensitive issue of consumption reduction.

The lack of sustainable consumption policies in New Zealand may be regarded as an indicator that similar to other developed countries, policy making in New Zealand is based largely on economic thinking. New Zealand’s relative low GDP per capita in comparison to other OECD countries (Statistics New Zealand 2005) has frequently raised concerns among policymakers and has often been cited as reason to pursue further economic growth. The New Zealand Government have planned initiatives to uplift New Zealand’s economic growth to a rate above the OECD average, and to sustain this rate over a period of years (Statistics New Zealand 2006).

However, New Zealand’s aims to sustain its natural environment and its pursuit of continued economic growth appear to be in conflict. For instance, a report by Statistics New Zealand (2002: 45) noted:

While economic growth...undoubtedly brings benefits in terms of increased incomes and material quality of life, there is sound evidence associating it with negative environmental and social effects. Without documenting, measuring, understanding, mitigating and where possible avoiding these negative impacts, desired levels of economic growth may not be sustainable, or may have costs to society that are unacceptable.

While the above account brings into question the negative outcomes of economic growth, by contrast, in a speech at the *New Zealand Association of Economists* annual conference in 2004, the Secretary to the *New Zealand Treasury*, Mr. John Whitehead affirmed that “improving and sustaining New Zealand’s economic growth” was “one of the Government’s main objectives” (Whitehead 2004: 1). He stressed: “If New Zealand is to catch-up to OECD average level of per capita GDP then New Zealand will need to grow faster than average OECD growth...” (*ibid*: 5). He cautioned that “the pace of growth in consumption and residential investment in New Zealand experienced during 2003 is expected to slow in 2004 feeding into weaker GDP growth” (*ibid*: 4). In his closing remarks, he emphasised the need for “research and debate about the components of policy necessary to achieve sustained higher economic growth” (*ibid*: 13). These aims declared by Mr. Whitehead reflect what Princen *et al.* (2002: 4) earlier observed – that policymaking is often dominated by economic reasoning and that the prevailing political assumption is that “consumption is nothing less than the purpose of the economy.” In addition, they noted that economic activity is seen simply as a matter of “supply and demand, and demand – that is, consumer purchasing behaviour – is relegated to the black box of consumer sovereignty” (*ibid*: 4). In this way political attention is diverted to production, and supplying consumers with whatever they desire (*ibid.*). Similarly, Sanne (2002: 275) remarked: “Governments – and business – tend to dress an aversion towards restrictions on consumption with references to consumer sovereignty”. However, as indicated in a report by OECD (2002), a trade-off between consumer sovereignty and paternalism is an aspect that would need to be addressed when considering governments’ role in advancing sustainable consumption.

In New Zealand, the lack of explicit sustainable consumption policies may inhibit progress in this area. Consumers may find it difficult to engage in sustainable consumption behaviour even when they desire to make changes. As described by Sanne (2002), consumers may find themselves ‘locked in’ unsustainable consumption practices, over which, they have little personal control. Jackson (2005a: 29) observed that consumers are entrapped within “unsustainable patterns of consumption, either by social norms that lie beyond individual control, or else by the constraints of the institutional context within which individual choice is executed.”

On the other hand, as De Leeuw (2005) observes, consumers are becoming increasingly concerned about the environmental and social backgrounds of products, in that they want to know how and where products are made, and who made them. De Leeuw hence asserted: “This increasing awareness about environmental and social issues is a sign of hope. Governments and industry must build on that” (*ibid*: 7). Consumers in New Zealand who want to make ethical choices in their purchase decisions may find that sufficient information is not readily available. This is one of many areas that need to be addressed in advancing sustainability in New Zealand, and this thesis argues

that sustainable consumption policies have a potentially large role to play towards this advancement.

A recent acknowledgement of the lack of policy in this area was found in a briefing paper by the Ministry of Economic Development (2005: 11) which stated: “Questions are increasingly being asked about the appropriate role for public policy in encouraging people to make sustainable consumption choices.” However, the paper also stated uncertainty about whether this is a role for the *Ministry of Consumer Affairs* considering the existence of other environment related agencies and ministries such as the *Energy Efficiency and Conservation Agency* and *Ministry for the Environment*.

Sustainable consumption policies may also open up opportunities for the social dimensions of sustainability – a dimension that is not well addressed in New Zealand. As Goldberg (2001: 9) observes, in comparison “to the environmental aspects, there has been little discussion in New Zealand thus far about the social dimension of sustainable development.”

A survey by the Growth and Innovation Advisory Board (2004) indicated that although most New Zealander’s did not oppose economic growth, responses reflected ‘polite support’ rather than passionate interest. The survey found that for younger New Zealanders, economic growth was not of personal importance. “They have less belief in economic growth resulting in better life and they have lower support for an economic growth goal” (*ibid*: 5). The survey suggested that since New Zealanders were not motivated by economic factors alone, growth would need to reflect values that are most meaningful to them, top three of which included: quality of life; quality of education; and, quality of the natural environment. In common with this finding, Lawson *et al.* (2006) reported that health, education and environment were three of four public policies New Zealanders believed should be prioritised for government spending. Considering that some of New Zealanders’ priorities are essential constituents of sustainable consumption principles, the adoption of related policies could help in fulfilling the ‘actual’ priorities of New Zealanders.

In summary, consultations with officials working in the sustainability arena, and a review of literature, affirmed the relevance of an information campaign on sustainable consumption to New Zealand. The topic of ‘sustainable consumption’ was regarded relevant to New Zealand in light of indicators of intensive consumerism, such as, increasing retail sales, credit card use and debt among its communities, and consequent environmental problems such as increases in waste deposits to landfills. Exploratory findings indicated the possibility of a lack of understanding of sustainable consumption principles among the New Zealand public. Exploratory findings also showed a lack of explicit public policies on sustainable consumption in New Zealand.

6.3 Methods and research design

6.3.1 Development of the campaign articles

The campaign articles were developed through a process of consultations and pre-testing which eventuated in five articles and a blurb. Figures 6-1 to 6-6 provide image copies of the articles. Although ‘sustainable consumption’ and consumerism were addressed in every article, each article emphasised a specific topic. The campaign was designed to meet three broad goals: (1) to enhance awareness about the negative social and environmental aspects of consumerism; (2) to enhance understanding about sustainable consumption; and, (3) to enhance awareness about commercial advertisements.

To further evaluate relevance of the campaign’s objectives to New Zealand, a consultation process was initiated with local sustainability proponents and practitioners⁷⁶. They were provided with draft copies of the campaign articles, and were asked to provide their views about the contents of the campaign and its relevance. All parties agreed with the relevance of such a campaign to New Zealand. Each provided thoughts and suggestions for the contents, implementation and evaluation of the information campaign, which were taken into account.

The campaign employed a particular strategy in the framing of its messages which included various theories and recommendations for effective and persuasive communication. As Lerbinger (1972: 22) suggested, the ‘message’ in a communication programme, “is the core of the stimulus situation and the part over which the communicator has the greatest control.” Hence, message framing needs to be approached theoretically and be based on many areas of specialisations such as semantics and social psychology (*ibid.*).

As some variations in the definition of the term ‘framing’ were observed in the communication literature⁷⁷ it deserves some clarification at this point. McCombs *et al.* (1997) have considered ‘framing’ to be an extension of media agenda-setting⁷⁸ effects – that in addition to enhancing the

⁷⁶ The process included, Professor Bob Kirk (Environment Canterbury) on 25 January 2005; Mr Bob Frame (Landcare Research) on 1 March 2005; the late Mr Rod Donald (Green Party Co-Leader) on 13 March 2005; Ms Diane Shelander and Mr Tony Moore (City Water and Waste Unit, Christchurch City Council) on 22 March 2005; Mr Jim Watt (Target Zero Programme Manager, Christchurch City Council) on 23 March 2005 and Dr Morgan Williams (Parliamentary Commissioner for the Environment) on 1 April 2005.

⁷⁷ Entman (2002) had in fact referred to “framing” as a scattered concept that is variably used and often casually defined in literature. Gamson and Modigliani (1989: 3) described a media frame as “a central organizing idea...for making sense of relevant events, suggesting what is at issue.” Wimmer and Dominic (2000: 391) referred to framing as a particular perspective or “spin” that the media grant to “events that they cover” which “in turn, might influence public attitudes on an issue.”

⁷⁸ The agenda setting theory indicates a correspondence between the order of importance of issues highlighted in the media and the order of importance attached to the same issues by the public (McQuail 1994).

salience of an issue the mass media may also enhance the salience of particular aspects of that issue by framing it in a certain manner. Scheufele (2000: 309), in contrast, argued that agenda-setting and framing are “based on distinctively different assumptions and therefore translate to equally different theoretical statements.” While agenda-setting is based on the increment of issue salience, in contrast, framing

is based on the assumption that subtle changes in the wording of the description of a situation might affect how audience members interpret this situation. In other words, framing influences how audiences think about issues, not by making aspects of the issue more salient, but by invoking interpretive schemas that influence the interpretation of incoming information (*ibid*: 309).

Drawing from the framing theory, as described by Scheufele, this study proposed that a careful selection of the words used to describe the proposed topic of ‘sustainable consumption’ may influence the public’s understanding and perceptions about it. Davis (1995: 295) observed that the framing of environmental messages does influence audiences responses to the “communication and subsequent intentions to participate in environmentally-responsible behaviors.” In an experimental study, Durfee (2006: 459) found “that the way the media frame a story about environmental issues has the potential to influence the audience’s perception”. Although, minimal, these past observations point to the potentials of the ‘message framing approach’. The theories and recommendations for effective communication that were considered in framing the campaign articles for this study are provided in Section 6.3.2

(i) Defining ‘sustainable consumption’ within the campaign articles

Although people may be aware of environmental problems they may lack knowledge about causal factors. For example, Simon (1971) found that although the American public were aware of air and water pollution, they did not make a connection between these problems and overpopulation, and they did not regard ‘people’ to be an important source of pollution. Stamm *et al.* (2000) have observed that when there is a lack of understanding of causal factors of a problem, people may not regard those factors as an area to be addressed in solution strategies, and when there is a lack of understanding of the effects of a problem, this could lead to the problem being perceived as less important. Considering these observations, it was assumed that for public appreciation of sustainable consumption as a solution, a good understanding of the problem, its causal factors, and its effects would be necessary. For this reason, in the campaign designed for this study, S&E problems were defined as effects resulting from the problem of consumerism; advertising was defined as an important causal factor of consumerism; and sustainable consumption was presented as a viable solution.

The Exploitation of Human “Needs”

Have you noticed how previous generations were happy even though they did not have as much material “needs” as we do today? Many of our “needs” have been enhanced from generation to generation through aggressive commercial advertising and marketing campaigns, leading to the creation of our current consumerist society.

Most people may say that they are not affected by advertisements; but, if advertisements were ineffective, advertising expenditure would not have reached today’s astonishing figures. In half a year, between January and June 2004, various media in New Zealand spent a total of \$1,029,254,000 on advertising; and these figures are expected to increase (Nielsen Media Research NZ). It is of course consumers who indirectly pay for advertising by buying the advertised products. It is a logical argument that product prices would be less, minus excessive advertising.

Experts say that it is impossible for people to switch off from the gamut of advertisements that are thrown at our faces every day. In her book, *Deadly Persuasion* Jean Kilbourne cautioned, “...much of advertising’s power comes from this belief that advertising does not affect us. The most effective kind of propaganda is that which is not recognized as propaganda. Because we think advertising is silly and trivial, we are less on guard, less critical, than we might otherwise be. It’s all in fun, it’s ridiculous. While we’re laughing, sometimes sneering, the commercial does its work”.

Modern advertising goes far beyond providing information for consumers to make informed decisions. Commercial advertisers have invested in years of research on consumer psychology to determine how human emotions can be used to sell products. Advertisements communicate subtle messages about how products can fulfil a variety of human needs such as safety, security, love, sense of belonging, and self-

esteem.

One advertising strategy is to imply that you are in some way inadequate, and then offer a product as a remedy or an affirmation of your worth. Masculinity or status is depicted in the ownership of the latest sports utility vehicle. Such adverts exploit the human need for self-esteem.

Some convey the message that through similar brand consciousness, you are part of a group, exploiting the human need for belonging. Taking advantage of the fundamental human need for safety, advertisers sell you a range of cleaning chemicals that they claim is necessary to protect your children and keep your family safe. Some adverts create “needs” for use and dispose products, with a hidden message that reusing is dirty.

Some tell you to be rid of old stuff to make room for more new stuff, glorifying wastefulness. Such adverts exploit the human need for adventure and new experiences. And, how many adverts might you have seen that shows how the need for freedom and care-freeness can be fulfilled through specific purchases?

Even if you think you are ignoring commercials, advertisers still reach you through skilful product placements in TV programmes and movies. Depictions of trendy lifestyles based on extravagant consumerism in magazines and TV programmes also indirectly induce many material needs in people.

The reality is that unrestricted consumerism often results in a variety of environmental problems and enhances social inequality. For example the promotion of luxury goods that only some can afford causes social inequality within our society to become more apparent. Such feelings of inequality can cause unhappiness, anxiety and stress². This is worsened when luxurious lifestyles are promoted as a norm in the media constantly sending the message that we “need” more stuff to fit in society.

What we really need in our society

today is a trend where sustainable consumption is the norm. A society that cares about the current and the future. A society that chooses quality of life over quantity in things. A trend set by society for society.

In his article *Consumer Angst*³, Paul Lutus provides some simple coping skills for dealing with advertisements:

1. “The first rule of advertising: if it is advertised, it is not a necessity”.

2. Most of our dissatisfactions are likely to be a result of “carefully engineered” marketing messages. By analysing and distinguishing our dissatisfactions we can respond to only those that are essential for survival.

3. “Ask yourself how much of an advertisement appeals to reason, and how much appeals to emotion. If the primary appeal is to emotion, you should expect to feel another, stronger emotion after the purchase: disappointment”

4. “Ask yourself if the advertisement describes a product, or instead describes you in unrealistic ways. After all, it is the real you that will be paying for the product, not the fantasy you that - deserves the very best.”

We can also protect ourselves from marketing messages, by fulfilling our emotional needs in other ways. Nurtured relationships with family and friends, charitable work and expression of creativity in any number of ways such as music, gardening or art – all have been shown to improve emotional well-being. The fulfilment of human needs through such alternatives is usually longer lasting and it costs less too.

References:

1. Kilbourne, Jean. 1999. *Deadly Persuasion: Why Women And Girls Must Fight the Addictive Power of Advertising*. The Free Press. New York, USA.
2. Bond, Michael. 2003. *The Pursuit of Happiness*. New Scientist. 180(2415): 40-47
3. Lutus, P. 2001. *Consumer Angst*. <http://arachnoid.com/lutus/p/consumerangst.htm>

Figure 6-1 Article titled, *The Exploitation of Human “Needs”*

Sustainable Consumption: Having The Heart To Care

Despite its complex definition, the principle of sustainable consumption is in fact quite simple. Sustainable consumption means caring about our selves and our neighbours. It means meeting our needs throughout our lifetime without endangering our wellbeing, for example, by choosing healthy food free of pesticides and additives. By choosing clean energy, we can ensure that we and our neighbours have clean air to breathe. This means better health for all and everyone benefits from lesser health care expenditure.

The definition of sustainable consumption officially adopted by the UN Commission on Sustainable Development is "the use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life-cycle so as not to jeopardise the needs of future generations"¹. Definitions of sustainable consumption often emphasise the need for intra- and inter-generational equality.

Put in a simpler way, sustainable consumption means caring about people we don't know, people in other countries whom we have never met but whom we are connected with through the products we consume. People in poorer countries work long hours in pitiable, often hazardous labour conditions, for very low wages, producing the things we purchase conveniently from our local shops. Sustainable consumption means caring enough about the people who produce the things we buy, to use our power as consumers to increase demand for goods that have been produced under fair labour conditions. This is intra-generational equality.

Sustainable consumption also means caring about our children's grandchildren, people we may never meet. This is inter-generational equality. Through our choices as consumers, we can decide the quantity of resources and

the quality of environment that future people are left with; for example, by asking for material and energy efficient products that don't generate hazardous waste materials when being produced or disposed of. Such demand provides the incentive for New Zealand industries to increase investments in environment-friendly technology, improvement in resource efficiency and product quality. This helps consumers save money through increased product durability and energy savings. With sustainable consumption everyone can benefit.

Sustainable consumption also means caring about the non-human beings that we share the planet with. For example, as consumers we can demand a stop to the manufacturing of yet another new range of cosmetics and cleaning products; removing the need for continuous testing on animals. We can choose humanely produced food, which ensures that the animals we consume had not lived a life of misery. Sustainable consumption also means caring about living entities such as forests and rivers, not only because of their economic or aesthetic values but also their values as essential life support systems.

By choosing to reduce unnecessary consumption of things we don't really need, while ensuring that whenever possible what we buy is environment-friendly, fair trade, not tested on animals, and locally grown without harmful chemicals, we can make a difference. Relating sustainable consumption to consumer power, the UNEP notes, "Companies need consumers to survive and many of them react very quickly to the messages they receive from the market. It is your right (and you have the power) to influence companies behaviour by making your own free choices."²

By telling our family and friends why we have made a switch to these alternatives, we might encourage them as well. With increased demand, the prices of these products can be brought down. As consumers we can also



demand more public policies that take into account the principle of sustainable consumption.

To care is a natural human inclination. We do have the hearts to care. At the end of it all, sustainable consumption can only happen if we open up our hearts to care enough to make it happen. The biggest gain to be experienced is the deep satisfaction gained from having cared enough.

References:

- 1 OECD, 2002. Policies to Promote Sustainable Consumption: An Overview, Organisation for Economic Co-operation and Development. ENV/EPOC/WPNEP(2001)18/FINAL
- 2 United Nations Environment Programme (undated brochure). Is the future yours? UNEP Youth Research Project: Sustainable Consumption. www.unep.org/pc/sustain/reports/youth/broch-english.pdf

These articles are part of a three month campaign on sustainable consumption - Look out for the next two articles in STANN's February issue.

Figure 6-2 Article titled, *Sustainable Consumption: Having the Heart to Care*

Alternative Sources of Happiness: Cheaper than Consumerism

New Zealand is fast becoming a consumerist society. Many spend weekends at shopping malls in pursuit of happiness. But can we really find happiness in the things we buy?

Psychologist Mihaly Csikszentmihalyi in his article "If We Are So Rich, Why Aren't We Happy?" discussed how research on the psychology of happiness repeatedly shows a weak link between material wealth and happiness¹. There is an abundance of reports confirming this².

A recent article in the *Journal of Business Ethics* referred to the increasing availability of purchase choices in the market as *hyperchoice*³. Although initially attractive, *hyperchoice* contributes to confusion and regret and is psychologically draining. In addition, consumerism can contribute to different types of unhappiness, such as stress over a credit card debt or worry about being robbed.

Satisfaction gained from material consumption is temporary. The initial thrill of purchasing something new is over very quickly, and we feel empty again. We then resort to yet another purchase to fill that emptiness, and we end up accumulating piles of things that we don't really need. It is important that we recognise 'retail therapy' for what it is - a marketing gimmick designed to make us think that consumerism is a psychological remedy, that it is somehow 'good for us'. Perhaps the notion of 'retail therapy' also distracts us from the hours of work that will be necessary to pay for our 'therapeutic' purchases.

There are also many alternative sources of happiness that are cheaper,

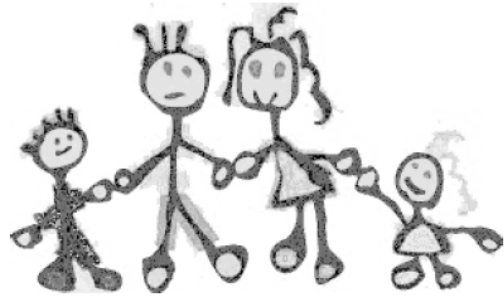
longer-lasting and less destructive than consumerism.

According to psychologists, the main determinants of happiness are social relations, satisfaction with work and leisure time to indulge in talents. Walks by the beach, quality time with friends and family, indulgence in creative skills, meaningful voluntary activities, bringing happiness to someone else's life — these are the 'things' that can contribute to the quality of our lives.

Environmental psychologists Nancy Wells and Gary Evans note the substantial amount of literature over the past 30 years that has illustrated the positive effects of natural environment on human wellbeing⁴. In their study, they found that children with access to nature close to their homes were better able to cope with stressful life events compared to children who had little access to nature. Such 'ecotherapy' may cost nothing, or no more than your transport to the nearest forest or beach.

Simply spending time playing with your pets can supply you with a daily dose of free 'pet therapy'. Carin Gorell reported in *Psychology Today* about a recent study that showed the health benefits of pet therapy in terms of reducing blood pressure and heart rates⁵.

Learning yoga or meditation can bring about peace of mind through natural relaxation techniques. These activities cost less and have lesser impact on the environment in comparison



to 'retail therapy'.

In France, the reduction of the workweek to 35 hours in 1998 had stimulated self-reflection among its citizens; it encouraged a move away from a range of materialistic values and a move towards the fulfilment of non-materialistic needs through activities related to friends and family, personal leisure and domestic-production⁶. Another survey indicated that a majority of the Swedish public expressed a preference for shorter work hours over higher incomes, to allow time for family, friends, leisure and acquiring new knowledge⁷. Although we have not reached this stage in New Zealand, an increasing number of people are opting for sustainable consumption, emphasising quality of life and not quantity of possessions, choosing wellbeing over wealth.

Sustainable consumption means caring about ourselves, our neighbours both near and far, as well as future generations. It means meeting our needs throughout our lifetime, without endangering our own wellbeing and without depriving future citizens of the equal opportunity to meet their needs.

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Figure 6-3 Article titled, *Alternative Sources of Happiness: Cheaper than Consumerism*

Is your child being manipulated by advertising?

"Can I have that toy mum?!"

"I want that lolly!!"

How many times have you had to deal with such requests when you were out shopping with your children? You find yourself giving in either because you are too tired after a long day of work or you feel guilty that you have not had time for your child. Psychologist Kate Birch, the popular author of the book *Positive Parenting*, says that it is the guilt of not being able to spend enough time with children that makes it difficult for parents to say no when children demand things¹. Marketers take advantage of this guilt through advertisements conveying the message that buying your child something makes you a better parent. Parents end up spending more time working to earn more money to buy more stuff for their children, leaving them even less time to spend with their children.

In America the number of hours couples spend shopping is seven times more than the time they spend playing with their children². This is the type of consumerist lifestyle that may be slowly seeping into New Zealand society. It is

up to us as a society to refuse to copy this lifestyle.

The irony is that all parents are aware that buying children new toys and the latest gadgets only makes them happy temporarily, yet many give in to their children's demands. The power of advertising is often underestimated. Advertising involving children is a highly specialised field in marketing. Children are viewed as an important target market because of their strong influence on family purchases. Advertising campaigns often aim to build brand loyalty at an early age. In the United States it has been estimated that children watch an average of four hours of television a day and are exposed to up to 25,000 commercials a year³.

Research shows that advertisements can increase materialistic values in children. A study conducted at McGill University, Canada, indicated that TV advertising can result in children preferring material objects over social activities such as playing with other children⁴. The study also indicated that TV advertisements have the potential to increase parent-child conflict and result in a disappointed and unhappy child. Younger children are especially unaware of the commercial motives of advertisements. In line with the findings of this and other research, a pilot survey conducted in 2002 by Massey University in Auckland, showed

that most parents and guardians of children aged 5-12, reported that advertisements encouraged children to desire unneeded products⁵. Another study conducted by Massey University in 2001 on children between 5-8 years of age, indicated that although awareness about commercial intent of advertisements increased with age, children of all age groups were influenced by advertisements⁶. The viewing of commercials led the children to desire particular products.

While Sweden and Norway have banned advertising to children, and Denmark, Greece and Belgium have restricted advertising to children⁷, advertising to children is still permitted in New Zealand, moderated only by voluntary codes of practice in the advertising industry. The responsibility hence is largely with parents to discuss the motives and consequences of advertising with their children. To combat the influence of advertising, it seems we need to teach our children to find happiness in interactions with animals, nature and other children rather than in having more things. Unlike gadgets and toys, it is the time that parents spend playing with children and teaching them about the more valuable things in life that can result in their children's lasting happiness.



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These articles are part of an awareness raising campaign on sustainable consumption – look out for more articles in Stann's March issue.

STANN relies on your contributions. Please send us your articles, letters and notices. The deadline for the March issue is February 25.

Figure 6-4 Article titled, *Is your child being manipulated by advertising?*

Sustainable Consumption at the Heart of our Values

What is sustainable consumption?

Sustainable consumption means caring about people we will never meet, people of the future. It means meeting our needs without depriving our children's grandchildren of the equal opportunity to meet their needs. It also means caring about ourselves; it means consuming without risking our wellbeing or the wellbeing of others we share the planet with.

Can one individual make sustainable consumption a reality?

It sometimes takes just one individual to set a trend. If we make a switch to environment-friendly products or if we decide to walk or bike to help lessen air pollution, by telling our friends and neighbours about it, we might set a trend. The positive impact of such changes could be multiplied many times in this way.

Do we really need sustainable consumption?

New Zealand is one of the top four countries with the highest ecological footprints¹; meaning extensive land and water is required to support the material living standards of New Zealanders. Sustainable consumption is hence an urgent need in New Zealand today.

Besides, everyone benefits from sustainable consumption:

1. A cleaner environment leads to better health, hence, less is spent on health care.
2. Durable and energy efficient products, results in savings for consumers.
3. Less waste and pollution means less taxpayers' money spent on landfills and cleanup.
4. Future generations benefit because they inherit a clean, healthy and liveable environment.
5. Reduced inequality leads to a more peaceful society, locally and globally.
6. Getting out of the work-and-spend cycle leaves more time for leisurely activities that can boost mental and physical wellbeing.
7. Minimising need for material wealth allows the option of fewer work

hours and more quality time with friends and family.

8. Animals benefit since ethical production methods means less suffering – a reflection of an animal-loving society.

9. People in poorer countries benefit from a fairer trading system and improved labour conditions.

10. Being an ethical and responsible consumer also provides you with a deep satisfaction – this is a priceless benefit.

Isn't recycling enough?

Although recycling has increased over the years, we are still rapidly filling up our landfills because we are consuming and discarding at a rate higher than ever before. According to the Christchurch City Council, in 2005 the volume of waste reached an all-time high of 263,000 tonnes. Up to 50 busloads of Christchurch rubbish is deposited in our landfill everyday.

Ian Britton © FreeFoto.com

Much waste is in fact generated at the production phase of a product. Hence, recycling alone is not enough. We need to address what causes us to generate such an amount of waste in the first place. In a recent report the Parliamentary Commissioner for the Environment noted consumerism as the root cause of the waste problem². The report noted how changes in technology and lifestyle and the promotion of 'disposability' by marketers as a trend have resulted in the development of a throwaway society in New Zealand.

Waste is only a fraction of the problem. Human consumption also results in indirect pollution of waterways through agricultural run-offs and sewage. Recent analysis by the National Institute of Water and Atmospheric Research indicated that water quality of over 80% of urban and pastoral streams did not meet recommended water quality standards³ and hence are unsafe for swimming or drinking.

Christchurch's long-standing air pollution problem may be worsened because of our high consumption of petrol and carbon dioxide emissions. Carbon dioxide contributes to global

warming effects that threaten the health and lives of future citizens.

A deteriorating environment is known to affect people emotionally because humans have an innate emotional bond with the natural environment⁴. A poor environment can sometimes make people feel depressed.

The result of careless consumerism is often a grim picture. What will future generations inherit? If we damage the house we live in, the next occupant may manage with some repairs; but, if we destroy the earth, it is unlikely that the next generation of occupants would be able to repair it, let alone make a new one.

Can Technology Help?

Although technical efficiency is important for sustainable consumption, technology has its limitations. Technical efficiency may result in lowered costs, leading to increases in production and consumption, offsetting the initial gains of environmental improvements⁵. New technologies often make older ones obsolete very quickly, constantly generating demand for new products. For example, the rapid upgrades of computers and mobile phones have resulted in a pile up of electronic waste. Besides, technology is far from neutral; usually only the advantages of new technology are made known publicly, while its economic, social, political, and cultural effects are not mentioned⁶. Technical improvements need to go hand-in-hand with responsible consumption if there is to be a truly sustainable society.

Questioning Consumerism

Consumerism is a huge opposing force to sustainable consumption. To understand this, we need to scrutinise the underlying systems that consumerism is based on. We need to see how excessive consumerism occurs at the expense of the environment and question its worth. For example, are cheap imports of low quality nondurable products worth the environmental costs when they end up in our landfills?

We need to question the impact of advertising and its pressures to consume,

Figure 6-5 Article titled, *Sustainable Consumption at the Heart of our Values*

especially on our youth. We need to question if the promotion of unaffordable luxurious living in the media contributes to feelings of discontentment, alienation and hostility within our society.

Are new trade agreements opening up doors to potential inequality between societies? Consumers are often unaware of the labour conditions and the impact of production processes on the environment and society in the producing countries. At present there are no regulations that require suppliers to display this information.

As consumers we hold the power to actualise sustainable consumption. We can make it known to suppliers that we want to know the environmental and social impacts of a product by writing to them or to the media. By limiting our purchases to only what we truly need, we make our contribution to positive impacts on the local and global environment.

Do we need Sustainable Consumption Policies?

Consumers who want to make a switch are often faced with many obstacles. For example they may find a limited choice of environment-friendly products or they may find these products to be too expensive. To make sustainable consumption accessible to all, support of the public, industry, the government

Have you thought about environmental insurance for your child?

Monetary insurance may ensure your child's financial security; but what about environmental insurance? The most valuable gift you can leave your child is not a house, a flashy car or a million dollar investment, but clean air, water and earth, and an environment capable of producing good quality food. To insure good environmental conditions essential for the quality of life of our children and their children's children, we need to think about how we consume and dispose, and the impact we make on the environment today. To ensure our children's environmental insurance we need to put into practise sustainable consumption today.

and the appropriate policies are necessary.

The need for sustainable consumption is internationally established. Canada the UK, Finland and Norway have come up with explicit government policies that address sustainable consumption. In New Zealand, although the Resource Management Act, NZ Waste Strategy, Energy Efficiency Strategy, Fisheries Act and the Sustainable Land Management Strategy address aspects of consumption and resource use, at present there is a lack of explicit public policy on sustainable consumption. The Ministry of Economic Development recently acknowledged in a briefing paper that "Questions are increasingly being asked about the appropriate role for public policy in encouraging people to make sustainable consumption

choices"⁷

Sustainable Consumption – at the heart of our values

An extensive public survey by The Commission for the Future indicated that a 'healthy environment,' 'safe and healthy society,' 'equitable society' and 'a caring cooperative community' were significant future visions of most New Zealanders⁸. More recently, a survey by the Growth & Innovation Advisory Board indicates that New Zealanders are not motivated by economic factors alone and that growth needs to reflect what is most meaningful to them which include quality of life and quality of the natural environment⁹. The principle of sustainable consumption clearly reflects core values of New Zealanders; hence, a demand for public policies that promote the principle of sustainable consumption is relevant and timely.

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Figure 6-6 Continuation of the article, *Sustainable Consumption at the Heart of our Values*, and blurb titled, *Have you thought about environmental insurance for your child?*

Two articles were generated for the purpose of increasing community understanding of ‘sustainable consumption’ and for enhancing appreciation of its underlying principles. The first, entitled, *Sustainable Consumption: Having the Heart to Care* (Figure 6-2) related the principles of sustainable consumption to the human value of caring. The second, *Sustainable Consumption at the Heart of Our Values* (Figures 6-5 and 6-6) provided the benefits of sustainable consumption; emphasised the need to move beyond just recycling; suggested the need to question consumerism; highlighted the necessity for sustainable consumption policies; and, showed how the principles of sustainable consumption reflected core values of New Zealanders. As detailed in Section 2.4, many have indicated the limitations of ‘technological efficiency’ as a solution to environmental problems. Reflecting this perspective, the article suggested that while technical efficiency was necessary for sustainability, sustainable consumption cannot be realised through technology alone, and that technological improvements would need to be combined with reduction in unnecessary consumption.

(ii) Pointing out the use of consumer psychology in advertising within the campaign articles

As detailed in Section 2.2.5, advertising driven consumerism was identified as an opposing force to sustainability. Hence, raising awareness on the use of consumer psychology⁷⁹ in advertising, and the resultant problem of consumerism were regarded to be particularly important aspects of the designed information campaign.

The possibility of a lack of public awareness in this area was also considered. However, this is not to say that the public are totally ignorant of the use of psychology in advertising. Friestad and Wright (1995: 62) maintain that people may have some socially constructed “folk knowledge” about “the psychology of advertising persuasion.” However, lay people and researchers may differ in how they give meaning to concepts in advertisement messages, or how they evaluate the effectiveness of persuasive content (*ibid.*).

Aside from self-taught individuals and those who have undergone formal education in a related field, it may be the case that people generally accept advertising as part of modern life and do not question how advertisements are made or how they influence purchase decisions. Krugman (1965: 352) observed that the impact of television advertising was largely a result of what he referred to as “learning without involvement”. Repetitive television advertising has been effective because

⁷⁹ The term ‘consumer psychology’ may be defined as the use of ‘psychological concepts and methods to understand consumer behaviour’ since such an understanding is key to success in business (Jacoby 2001, p. 2674). Research on consumer psychology examines preferences, customs, habits and attitudes of consumers and is often used in the design of advertisements and in new product development (Encyclopaedia Britannica, 2006)

people let their guards down when viewing commercials; therefore, their perceptions about products and brands are impacted without them contemplating at the time of exposure or at any point in the period before purchase (*ibid.*). In addition, Krugman says, the success of television advertising appears to be grounded “on a left-handed kind of public trust that sees no great importance in the matter” (*ibid.*: 354).

Despite the increasing attention given to societal impacts of advertising, many still believe that they are personally not affected by advertising and that they are able to tune-out advertisements (Clark, 1988; Kilbourne 1999a; Sutherland 1993). “Asked about the power of advertising in research surveys, most agree that it works, but not on them” (Clark 1988: 13). However, Kilbourne (1999a) argued that it is impossible to tune-out advertisements because of their sheer amount and the fact that many advertisements are carefully constructed to push through the ‘tuning out’ process. Moreover, Rice (1988) observed that methods used by psychographic research agencies are often inaccessible and protected as trade secrets. Dawson (2003) reasoned that corporations keep their marketing plans and strategies strictly confidential to prevent consumer awareness, because customers who see how advertisers are successfully pushing the right buttons that make them buy, are likely to refuse to buy, and may even retaliate. Cotte *et al.* (2005) found that when consumers recognised the manipulative tactic within an advertisement (the use of guilt appeal, in the case of their study), they respond negatively toward the advertisement and the advertiser, and the advertisement hence loses its intended effect. Although Cotte *et al.* intended to provide cautionary advice to businesses, their finding is of interest to the objectives of the information campaign on ‘sustainable consumption’ under study, as it points to the importance of enhancing consumer awareness about the emotional and psychological tactics used by advertisers as a strategy to encourage resistance to advertisement messages which may in turn bring about a reduction in consumption of non-need items.

Drawing from the above, it was reasoned that greater awareness of the amount of psychological knowledge that has been generated for the purpose of encouraging consumption could help bring about the realisation of the artificial needs induced by advertising. In addition, as detailed in Sections 2.2 and 2.4, it was necessary to discuss sustainable consumption (a solution to a problem) in relation to consumerism (a cause of the problem) and advertising (its driver).

Two articles were generated for the above purpose. The first, entitled *The Exploitation of Human “Needs”* (Figure 6-1), discussed how psychology and emotional appeals were used to increase consumer demand for non-need items. The second article, entitled, *Is your child being manipulated by advertising?* (Figure 6-4) discussed how advertisements take advantage of parent’s guilt, and the negative impacts of advertising on children and parent-child relationship. In this article, a point made by De Graaf *et al.* (2001) that the amount of time Americans spent shopping was sevenfold

compared to the time they spent playing with their children, was provided. Readers were cautioned that this type of consumerist lifestyle may be slowing seeping into New Zealand, but that it was up to New Zealanders as a society to refuse mimicking this lifestyle. New Zealand's Parliamentary Commissioner for the Environment suggested that one way to address the consumption issue would be to encourage people to reconnect with what they genuinely value in life (PCE 2004). For example, parents could be encouraged to consider if they would rather spend more time with their children as they grow, or put in longer work hours to earn more, in order to buy more things for their children (*ibid.*). Considering this suggestion, the article suggested that parents could teach their children that happiness is to be found in relationships and appreciation of nature rather than in things, and that the time they spend doing this could help shape the personalities of their children and provide long lasting memories of a happy childhood.

(iii) Questioning consumerism within the campaign articles

The article, *The Exploitation of Human "Needs"* (Figure 6-1) noted how consumerism contributes to wasteful behaviour, and how it causes social inequality within society. The article, *Sustainable Consumption at the Heart of our Values* (Figures 6-5 and 6-6) re-emphasised that the growing amounts of waste and pollution were a result of careless consumerism.

Advertising messages often equate happiness with purchase of things (Cohan 2001). Advertisers regard "the promise of happiness" to be a crucial incentive that can be used in the selling of an array of products, from headache-relief medication to property acquisition (Dichter 1986: 110). To counterbalance advertisements' promise of happiness in things, the campaign article, *Alternative Sources of Happiness: Cheaper than Consumerism* (Figure 6-3), noted how research results have repeatedly indicated that the opposite was true – citing Csikszentmihalyi (1999) and referring to Bond (2003), Diener and Biswas-Diener (2002), Durning (1994), Easterlin (1995) and Frank (2004). The article noted how happiness gained from buying was often short-lived. In addition, the article mentioned the negative psychological effect of too many choices that Mick *et al.* (2004) have referred to as 'hyperchoice' – a situation which eventually leads to confusion and regret and psychological exhaustion. The article then noted that the main determinants of happiness were personal relationships, satisfaction with work, and leisure time to indulge in talents and creativity. Furthermore, the article suggested ecotherapy, pet therapy, yoga and meditation – activities that cost less and have lesser impact on the environment as alternatives to the notion of retail therapy.

6.3.2 Theories and recommendations for effective and persuasive communication

In framing the campaign articles, literature on effective and persuasive communication were consulted. Although a focus was given to literature on environmental communication, considering its limited availability and scope, strategies were drawn from other fields such as communication

psychology, public relations communication, language, motivational approaches, community-based social marketing, and advertising.

Obermiller (1995) suggested that to persuade the adoption of environment-friendly behaviour among consumers, goal-oriented communication strategies need to be employed. Therefore, the development of messages about sustainability should ideally take into account recommendations that have been made for effective communication. However, the availability of such information was found to be somewhat limited. Obermiller (1995) pointed out the lack of research in purposeful communication strategies for addressing environmental problems. Although social marketing and public relations were identified as fields to consult for effective public communication strategies, these fields as well face similar problems with communication strategy. For example, Bloom and Novelli (1981) observed that social marketers often have limited capacity to pre-test information campaigns, and that unlike commercial marketers, social marketers rarely have research data about their target audience. Even when such background information existed, it was often weak as a result of inadequate sampling and simplified analysis carried out with limited budgets (*ibid.*). Hallahan (2000) observed similar limitations in effective communication strategies in public relations literature. This research hence identified the need to expand the search for effective communication strategies for the communication of sustainability and the need for the documentation of such strategies for the purpose of developing the proposed ‘message framing approach’. In what follows, the various theories and recommendations for effective communication that were considered in the development of the information campaign for this study are provided.

(i) Emotional appeal

Lunsford and Connors (1989) suggested that for successful communication, an appeal should be made to logic and reason and supplemented with an appeal to the reader’s emotion. They noted that in a fund-raising effort for famine victims, while facts and figures provided a logical appeal to the cause – which convinced people about the reality and seriousness of the situation; it was photographs of the victims that elicited an emotional response that resulted in outpouring aid from the public. Lunsford and Connors proposed that similar powerful effects could be achieved in written work through descriptive and figurative language. Hayakawa (1978: 106) suggested that a “flow of sympathy” between one person and another, which is necessary for the establishment of society and community, could be achieved through “affective” language – language that expresses feelings to elicit a similar feeling in the reader, and consequently arousing sympathy. Considering these suggestions, in designing the information campaign for this study, the notion of ‘caring’ was purposefully used to provide an emotional appeal in the articles that explained sustainable consumption. The article *Sustainable Consumption: Having the Heart to Care* (Figure 6-2) described how people could make personal consumption choices that were considerate of others’ wellbeing. Inter-generational equality was equated to caring about one’s children’s grandchildren.

To appeal to the reader's sympathy, the article described how people in poorer countries work in poor labour conditions for very low wages. Intra-generational equality was equated to caring about these people, by increasing demand for goods produced under fairer labour conditions.

Kals *et al.* (1999) reported findings that an emotional affinity towards nature was a powerful determinant of "nature-protective behaviour." This affinity towards nature, they observed, was often linked with present and past experiences in natural environments. Considering their observations, the campaign articles in this study attempted to encourage affiliations with natural environments, by highlighting their therapeutic effects. In the article *Alternative Sources of Happiness: Cheaper than Consumerism* (Figure 6-3), for instance, 'ecotherapy' was introduced as an alternative to 'retail therapy'. The article *Is your child being manipulated by advertising?* (Figure 6-4) encouraged parents to teach their children to find happiness in interactions with animals and nature.

(ii) Intrinsic satisfaction

De Young (2000) suggested that the promotion of environmentally-responsible behaviour using 'intrinsic satisfaction' as a motivator could result in behaviour change that can be sustained over a period of time. Considering the lack of resources for repeated interventions it becomes important to ensure the durability of the induced behaviour change without the need for repeated interventions (*ibid.*). McLaughlin and Davidson (1994) suggested that consumerism cannot be overcome by merely requesting people to stop consuming and that people need to be inspired by a purpose of life that is noble and fulfilling. Considering these suggestions, the article *Sustainable Consumption: Having the Heart to Care* (Figure 6-2) concluded by highlighting an intrinsic satisfaction to be gained: "The biggest gain to be experienced is the deep satisfaction gained from having cared enough". The article *Sustainable Consumption at the Heart of our Values* (Figure 6-5) noted the deep satisfaction gained from being an ethical and responsible consumer to be a priceless benefit.

(iii) Community / social norms

Staats, Wit and Midden (1996) suggested that in order to motivate behavioural changes, media environmental campaigns would need to convince the target audience that their fellow citizens and other concerned parties would also be making the necessary changes. Likewise, McKenzie-Mohr and Smith (1999) observed that people's behaviours were often determined by the behaviours of others around them, in other words, that which is perceived to be a behavioural norm in society. While recycling was regarded as behaviour that was increasingly becoming a community norm in New Zealand, it was not possible to claim 'sustainable consumption behaviour' in general, as an existing community norm for the purpose of this campaign. Therefore, the article *Sustainable Consumption at the Heart of our Values* (Figures 6-5 and 6-6) discussed instead how the principle

of sustainable consumption reflected core values of New Zealanders. To make this point, the article drew upon results of a public survey conducted by New Zealand's *Commission for the Future* that found that the future vision of most New Zealanders included 'healthy environment;' 'safe and healthy society;' 'equitable society;' and, 'a caring cooperative community' (Curtis 2002). The article also referred to a survey by the Growth and Innovation Advisory Board (2004) that found that New Zealanders were highly concerned about quality of life and quality of the natural environment, and wanted growth that reflected these aspects. It was speculated that the association between the principles of sustainable consumption and the prevalent values and aspiration of New Zealanders, might portray sustainable consumption behaviour as behaviour that was perceived to be important by many, hence the norm in community. To further inspire such a perception, the article *Alternative Sources of Happiness: Cheaper than Consumerism* (Figure 6-3) described an emerging sustainable society in New Zealand. This article indicated that an increasing number of people were "opting for sustainable consumption, emphasising quality of life and not quantity in things, choosing true wellbeing over wealth in unnecessary possessions."

(iv) Catchy titles

According to McKenzie-Mohr and Smith (1999: 84), "persuasion begins with capturing attention. Without attention, persuasion is impossible." Catchy titles, therefore, need to be formulated using effective language (Hayakawa 1978). In designing the present information campaign an attempt was made to construct titles that would attract reader attention. This was emphasised in the pre-testing process, where titles were refined based on feedback.

(v) Self-interest and benefits

De Young (2000) suggested that 'self-interest' was a strong motive for behavioural change. In a study testing the effectiveness of different message frames, Davis (1995: 295) observed that respondents "were most favorable toward (and most influenced by) a communication which emphasized the negative consequences of their own inaction on themselves and their own generation." Considering these observations of self-interest as an effective motivational appeal, the idea of caring about oneself was included in the explanation of sustainable consumption. The introductory paragraph of the article *Sustainable Consumption: Having the Heart to Care* (Figure 6-2) stated: "Sustainable consumption means caring about our selves and our neighbours. It means meeting our needs throughout our lifetime without endangering our well-being, for example, by choosing healthy food free of pesticides and additives."

McKenzie-Mohr (2000) suggested that to initiate behavioural change at the community level benefits of the change would need to be highlighted. In this study, the article *Sustainable Consumption at the Heart of our Values* (Figures 6-5) listed ten benefits to be gained from

sustainable consumption practices. While some benefits such as cleaner environment and social equality were commonly shared benefits, other benefits appealed to self-interest, for example, monetary savings gained from energy efficient products and reduced government spending on landfills and clean-up activities.

(vi) Altruism and sacrifice

Literature addressing ‘altruism’ as a behavioural motivation appeared inconsistent. On the one hand, altruism was regarded to be an ‘ethical responsibility’ value that could nurture sustainable consumption (OECD 1999), and as a value that is necessary in addressing environmental and social problems (Brown and Cameron 2000; Hay 2005). On the other, altruism and its associated notion of sacrifice were negatively noted for environmental communication strategies. Kaplan (2000), for example, maintained that approaches in motivating environmental behaviour described in academic literature were too focused on altruism – an aspect that inadvertently stresses sacrifice rather than quality of life. In addition, the altruistic approach, according to Kaplan, neglects the self-interest aspect of human behaviour that is more concerned about benefits. He added that altruism carries the implicit idea that making do with less means a life of deprivation and joylessness. Similarly, a report by New Zealand’s Parliamentary Commissioner for the Environment suggested that when the environment is not a priority for people, in environmental communication, the emphasis should be on what is to be gained, rather than what is to be given up (PCE 2004).

In contrast, Jackson (2005b) argued that value orientation that is based on self-interest serves as a motivator for only a limited proportion of pro-environmental behaviour. He argued that while certain behaviour can be stimulated by self-serving interests alone, other behaviours are motivated by altruism, pro-social values and biospheric values. In addition, altruism has been noted to be a contributor of happiness. Referring to a nationwide American survey in 1976, in which altruists had reported higher levels of subjective happiness, Phelps (2001: 293) reported that her own research added evidence that a factor preventing “improvement in macro measures of happiness” was a constant or decline in the percentage of altruists within the population in United States. De Vliert, Huang and Parker (2004: 19) equated altruism with happiness since the two shared “the same underlying notion of quality of life”. Actions motivated by altruism, makes the doer feel good and reciprocal altruism results in happiness (*ibid.*). Such happiness may be regarded as an ‘intrinsic satisfaction’, which Kaplan (2000) has identified to be a durable source of motivation, essential for sustaining behavioural change – ironically, this would in turn interpret altruism as an effective motivational appeal.

Considering the conflicting information in literature about the use of altruism as a motivational appeal, notions of altruism and sacrifice were minimised in the information campaign designed for this study. Although the need to reduce consumption of unnecessary items indicated in the article

Sustainable Consumption: Having the Heart to Care (Figure 6-2) may be interpreted as a call for sacrifice, and the appeal to care about others may be interpreted as a moral appeal for altruism, these were balanced with both individual and commonly shared benefits to be gained from sustainable consumption practices.

(vii) The ‘doom and gloom’ approach and overwhelming information

Highlighting the ‘doom and gloom’ aspects of consumption may be an ineffective way of communicating to people (PCE 2004). Webster (2004) suggested that to understand the meaning of sustainable development it may sometimes be necessary to understand what is unsustainable about the world and its root causes. A common method employed to explain what is unsustainable is a presentation of a selection of world trends, showing increases of stress on the ecosystem (*ibid.*). These may include escalating graphs of emissions and resource use headed in the wrong direction (*ibid.*). The rationale behind this approach, sometimes condemned as the ‘doom and gloom’ approach, was that people first need to know the facts before they can be expected to take actions for change (*ibid.*). Akin to the ‘doom and gloom’ approach is what Fine (1990 *cited in* Obermiller 1995: 55) refers to as the ‘sick baby’ appeal. This appeal which is commonly used in social marketing is an approach that is centred on the problem and its severity and is based on the rationale that people would respond to issues that are important and serious (*ibid.*). However, Webster (2004) argued that such rationales may be naïve, considering the complexity of human motivation. Responses to such messages, according to Webster, “can range from feeling overwhelmed and powerless, to complete denial; from self-guilt to blaming others; from enthusiasm through to weary indifference” (*ibid.*: 7). Webster suggested that such negative effects could be toned down by providing some positive examples – conveying instead a message that says: “Things are bad but not all bad” (*ibid.*: 7).

Too much negative information may also result counterproductive effects. Webster (2004: 7) maintained that “in today’s jaded information-overloaded societies” the response is likely to be: “Whatever...let’s have some fun while we still can!” Oepen (2000b: 49) noted that some studies have suggested “that greater knowledge about environmental problems can lead to a state of general anxiety, a denial of the problems or a complete refusal to think about environmental problems.” Oskamp (2000) observes that when environmental problems are presented as extensive, people tend to feel that there is not much they can do on their own, and that since environmental problems are long-term, there are no readily available solutions. Similarly, Obermiller (1995) noted that information about the severity of a wide array of problems may make the problems seem insolvable. In addition, Nelson (1998: 37) cautioned the possibility of desensitisation to excessive information:

Overwhelming people with a barrage of bad news about the environment or making people feel guilty about their consumptive lifestyles does not often inspire people to change their behavior.

In fact, this approach often creates the opposite effect: people become desensitized to all of the bad news and become apathetic.

Levin (1993: 29) reported how a study by Research International involving twenty-nine countries, revealed that “in countries where the environment” was “a hot [media] topic, many citizens expressed concern but seemed helpless about how to cope with the issue”. This may be disadvantageous, considering Kaplan’s (2000) observation that feelings of helplessness in people may in turn result in the perception that any changes in their behaviour are not going to make a difference, hence contributing to reluctance towards behaviour change.

On the other hand, presentation of some quantitative information concerning the communicated problem may be an advantage. As Slater *et al.* (1998) observe, past empirical research has suggested that quantitative information can enhance the persuasive effects of the communicated message. This is based on the assumption that the “quantitative information serves as credible and direct evidence” for the advocated cause (*ibid*: 49). Furthermore, Lunsford and Connors (1989) suggested that facts and figures that are convincing evidence on the reality and seriousness of a problem can provide an appeal to logic and reason in enhancing a communication’s effectiveness.

In the information campaign designed for this study, although points about the extensiveness of environmental problems such as waste, and air and water pollution were unavoidable, these were made brief and fact-based, to avoid the possible negative effects as described by Nelson (1998), Oskamp (2000), and Webster (2004). Instead, quantitative facts that described the extent of the problem, as suggested by Lunsford and Connors (1989) and Slater *et al.* (1998), were provided. For example, in emphasising the extent of the waste problem in Christchurch, waste generation figures provided by the Christchurch City Council were quoted. The focus on local environmental problems was also an important factor of the campaign considering a previous research by Gökşen, *et al.* (2002) that showed that concerns expressed by individuals with materialist values was significantly higher for local environmental problems in comparison to global environmental problems.

(viii) Clear steps of action

From a psychological perspective, Oskamp (2000) suggested the need to provide ‘clear steps of action’ that can be taken in addressing a problem. ‘Clear steps of action’ was hence identified as important for effective communication. Moreover, Obermiller (1995) observed that the ‘well baby’ social marketing appeal is preferable for communication about environmental issues that people are already concerned about, since it enhances the belief that something can be done to resolve the problem and it affirms the potential impact of individual action. Considering previous observation that New Zealanders generally do have concerns about the environment and social equality (Curtis

2002), the current information campaign adopted the ‘well baby’ appeal, and emphasised what people could do as consumers in addressing the problems. For example, the article *Sustainable Consumption: Having the Heart to Care* (Figure 6-2) emphasised how people could make a difference through their consumption choices. The article *Sustainable Consumption at the Heart of our Values* (Figures 6-5 and 6-6) suggested that consumers could vocally question the driving forces of consumerism, demand sustainably produced goods, and utilise their power as consumers in demanding information from suppliers about the environmental and social impacts of products. To heighten the significance of individual action, the article emphasised that a new trend could be initiated through the actions of a single individual, and that by encouraging others, the positive impact of individual change could be multiplied.

(ix) ‘Fear’, ‘guilt’ and ‘blame’ tactics

Oepen (2000c: 159) included “fear arousal” and “guilt feeling” as appeals that may be considered in enhancing environmental message effectiveness. However, considering the mixed views found in literature, ‘fear’, ‘guilt’ and ‘blame tactics’ were avoided in the information campaign designed for this study. Fear appeals are “messages that attempt to achieve opinion change by establishing the negative consequences of failing to agree with the advocated position” (Dillard 1994: 295) and are popularly used in social marketing campaigns (Hastings, Stead and Webb 2004). Lerbinger (1972: 109) noted that the general recommendation was that a mild rather than a strong form of fear appeal is used, as strong fear appeals may cause “hostility toward the communicator or lead to all kinds of rationali[s]ations for not following” what the plea recommends. However, Lerbinger added that despite the dangers of strong fear appeals, at times such appeals are more effective. “The rule that seems to operate is that if an audience seems unconcerned about a danger then a stronger ‘anxiety-producing’ stimulus is needed to get through to them than if they are already worried about an issue” (*ibid*: 109). However, psychological research shows that because of people’s tendency to repress or deny fearful topics, the use of fear stimuli is often unsuccessful in bringing about desired behavioural changes (Oskamp 2000). In addition, there are ethical issues arising from the unintended harmful effects of fear appeals, as Hastings, Stead and Webb (2004: 961) have noted:

Ethical concerns about fear appeals include maladaptive responses such as chronic heightened anxiety among those most at risk and, paradoxically, complacency among those not directly targeted, and increased social inequity between those who respond to fear campaigns, who tend to be better off, and those who do not, who tend to be the less educated and poorer members of society.

De Vries *et al.* (2002) observed that environmental issues contain some unique properties which makes the application of fear appeals in related communication rather difficult. They noted:

...the inclusion of fear appeals in communications on environmental behaviour has only limited usefulness. A first problem arises from the temporal and physical distance between actions and environmental effect. Second, environmental effects are large-scale, with low personal

responsibility of individual citizens (at least, in their perception). Even when fear-arousing images of the consequences of human behaviour are included in a communication, the general public may react in a fatalistic manner ('What could I do about that?') (*ibid*: 102).

On the other hand, fear appeal in media communication about genetically-modified food (GMF) appears to have successfully impacted on attitudes. Citing media messages containing terms that directly appeal to fear, such as "Frankenfoods," "unreliable," and "disaster", Laros and Steenkamp (2004: 890) noted that because of the environmental and health risks projected in such messages, "the public acquires the belief that GMFs are a major problem in that they affect both the natural habitat and the health of the world's population." However, Hastings, Stead and Webb (2004) pointed out that the long-term effects of fear appeals remain unclear. Leal and Borner (2005b) maintain that fear appeals may only be effective if provided in combination with clear steps of feasible preventative actions that can be taken. Hence, as Cameron (2002: 7) suggested, "Messages need to present information in a manner that prompts concern (but not extreme fear) and offers a plan of action that will alleviate the threatened consequences."

Similar to the fear appeal, the guilt tactic is not recommended for environmental communication. According to psychologists and behavioural scientists consulted by the UNEP, traditional messages from governments and environmental movements that urge environmentally-friendly lifestyle and buying choices are ineffective because they are too 'guilt-laden' and disapproving and hence turn people off (UNEP 2003). These observations were in accord with the psychological analysis of communication as described in Transactional Analysis⁸⁰. Applying Transactional Analysis to the context of public communication, a public communicator who resorts to blaming or making people feel guilty initiates a 'parent-to-child' transaction. Such a transaction may result in an uncomplimentary or "crossed transaction", as described by Harris (1995: 77) which results in a disruption of the communication process – hence ineffective in bringing about desired results. An 'adult-to-adult' transaction is likely to be what works best in public communication, where the communicator conveys messages in an adult mode (the thinking and rationalising mode) and is therefore more likely to receive a like mannered response from the recipient of the message. In addition, ecopsychologists⁸¹ believe that the depression that drives people to shop originates from a feeling of emptiness and not necessarily from greed, hence making people feel guilty in an attempt to make them change consumption habits would be ineffective (Roszak 1996). In the designed

⁸⁰ Transactional Analysis, is "an approach to interactional psychotherapy" (Holland 1973: 353) that was developed by Dr. Eric Berne in the 1960s (Berne 1961), and later described by Dr Thomas Harris in his popular book "I'm OK-You're OK" (Harris 1995).

⁸¹ "Ecopsychology is a relatively recent field within psychology that employs empirical, theoretical, and clinical means in order to understand and treat the rapidly changing and recent human condition and dysfunction based on a radical and continuing *estrangement from wild and natural spaces*" (Sevilla 2006: 36). Ecopsychology may also be "understood as a clinical practice where ecologically minded and trained psychologists and counselors employ a variety of traditional as well as non-traditional (therapies) to sensitize, habituate, educate, as well as bring people toward a reconstruction of their affinity to the wild and the natural" (*ibid*: 37).

information campaign, instead of a focus on individual consumption behaviour, the role advertising plays in the proliferation of consumerism in New Zealand was emphasised. Therefore, the advertiser, rather than the individual was 'blamed'.

Roberts and Bacon (1997: 88) suggested that environmental campaigns should avoid "blaming the victim" strategies especially when it is existing macro conditions that are contributing to the problem or when there are constraints that limit individual efforts, such as lack of available environment-friendly products and government inactivity. Constraints such as these, that individuals may face, were highlighted in the article *Sustainable Consumption at the Heart of our Values* (Figure 6-6) and a suggestion was made for public policies that reflected sustainable consumption principles, in order to make sustainable consumption choices accessible to all.

(x) Message source

Although Syme and Seligman (2000) noted that research findings have been consistent in pointing to the importance of source credibility for communication persuasiveness in conservation campaigns, Dholakia and Sternthal's (1977) findings on message source credibility showed contradicting effects on attitude. In their study they found that a source with lower credibility was more effective in inducing positive attitude towards the advocated message when the message recipients' own behaviour was a prompt in determining their attitudes (*ibid.*). They hence suggested caution when deciding on the need to pursue strategies to improve source credibility (*ibid.*). On the other hand, Solomon (1999: 238) maintains that in most circumstances, "the source of a message can have a big impact on the likelihood the message will be accepted" and that source credibility and attractiveness were particularly important for communication success. Source credibility, as Solomon notes, "refers to a source's perceived expertise, objectivity, or trustworthiness" while a source's attractiveness has to do with "the source's perceived social value" which can "emanate from the person's physical appearance, personality, social status, or his or her similarity to the receiver" (*ibid.*: 239-240).

In this research, to prevent the association of the articles with the evaluation, the author of the campaign articles (which was the researcher herself) was not identified in the campaign articles. If the lack of source identification affects perceptions about source credibility, then this may have been a factor decreasing message effectiveness, in this study.

In summary, considering reports about their disadvantages and negative aspects, the notion of altruism and sacrifice; the usage of the so-called 'doom and gloom' approach; and, fear, guilt and blame tactics, were avoided in the designed campaign articles. Instead, the articles attempted to provide an emotional appeal; detailed the benefits and positive aspects of sustainable consumption

behaviour; highlighted the intrinsic satisfaction to be gained; and, suggested actions and alternatives.

6.3.3 Procedures in testing the campaign articles and trial running of the research instrument

The draft articles and the research instrument (Appendix 13) were tested and refined through a series of consultations and trial interviews. Based on the feedback received, the articles and research instrument were progressively edited.

In addition to supervisory inputs provided by Associate Professor Jim Tully and Dr. Joanna Goven (School of Political Science and Communication, University of Canterbury), initial consultations with local proponents of sustainability (see Section 6.3.1) and with experts in the field helped with the foundation of the campaign articles. Draft articles were emailed to Professor Lea Jane Parker (School of Communication, Northern Arizona University) who provided general feedback. Articles concerning sustainable consumption were emailed to Mr Bas de Leeuw and Ms Solange Montillaud-Joel (United Nations Environment Programme) and their comments were noted. Detailed feedback on draft articles was also received from Mr. Tony Moore (Christchurch City Council) and from Mr. Warren Snow (Envision New Zealand). All suggestions were taken into account in the editing process. In addition to this, five individual consultations and a group discussion with community members facilitated further refinement of the campaign articles.

Testing of campaign messages is important to ensure their comprehensibility and to ensure their persuasiveness (Day 2000). Extracting from theories and recommendations for effective communication (Section 6.3.2), a list of *dos and don'ts* for effective communication (Figure 6-7) was constructed to help guide the testing of the articles. During individual consultations, the *dos and don'ts* list was presented to participants, and they were asked to identify aspects that they observed in draft versions of the articles. In addition, participants were also asked to point out sentences that they found to be difficult to understand or confusing. Sentences and aspects in the articles that posed potential problems were reconstructed.

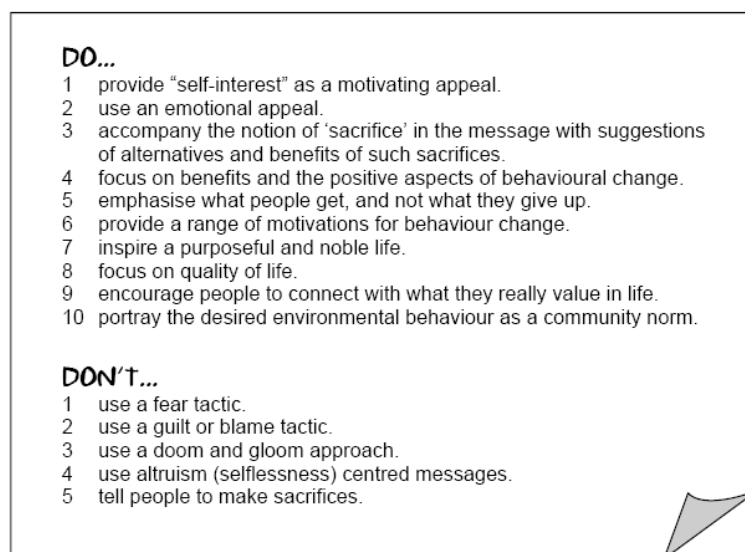


Figure 6-7 Dos and Don'ts list for effective communication used in the pre-testing process

The first individual consultation to test campaign articles was conducted on 2 August 2005, using a first draft. A second was conducted on 19 August 2005, using an edited second draft. This was followed by further material search to substantiate contents.

In the subsequent testing process, a trial interview was first conducted before respondents were provided the articles (third draft) to read and comment on. This was done with two individuals on 3 and 4 October 2005.

With the organisational assistance from STANN's editor, Ms. Douceline Wardle, another five trial interviews were conducted on 5 October 2005. These included members of the St Albans Residents Association, volunteers at the St Alban's Community Centre, and the editor herself. They were then each provided a set of draft articles to read. Two individuals also participated in a trial post-interview, to help identify if the articles impacted on their views and understanding. Due to the substantial amount of time required, the complete testing methodology that included a trial pre-interview, reading of articles, and a trial post-interview was feasible with only these two participants. Although signs of effect were not clearly evident for the two in this study, this was regarded to be an ideal testing methodology, as it allows for the trialling of the research instrument, the campaign messages, and a test of possible effects.

On the following day, four of the above group participated in a group discussion with the researcher at the St Albans Community Centre. As was done with individual consultations, the researcher went through each item on the *dos and don'ts* list and asked participants to identify those that they observed within the article. The editor, who was part of this discussion group,

summarised views of the group conclusively for each aspect discussed. With consent from all members, the discussion was recorded, and later transcribed.

Although participants found that the articles did propose altruism, they did not think that the emphasis was on the need to make sacrifices. They agreed that the focus was on what people gained rather than what they had to give up. They, however, pointed out that self-interest as a motivation appeal was not prominent. One suggested that the benefits to be gained could be made more explicit if it was presented in point form. This suggestion was upheld in the final version of the article *Sustainable Consumption at the Heart of our Values* (Figure 6-5). The group noted the difficulty of portraying sustainable consumption behaviour as a community norm in New Zealand, since it was not.

The researcher then posed the following questions, to which the group exchanged views and provided comments:

1. Would the title of the campaign and the title of each of the messages attract your attention, if it had appeared in a newsletter, newspaper or magazine?
2. Can you suggest an alternative title that would better attract your attention?
3. Did you find the articles to be informative enough, in terms of providing an understanding in the following areas: sustainable consumption, consumerism and advertising effects?
4. Do you think the messages are persuasive enough that it would encourage people to think about the issues?
5. How effective do you think the message would be at motivating people to make changes to their consumption behaviour?
6. What do you suggest to make the messages more persuasive?

Although the group found the articles to be informative and believed that the articles would encourage people to think about the issues, they were uncertain if it would result in any change in behaviour. In addressing this aspect, one participant suggested the inclusion of an interview question on behavioural change intention, which was taken into account.

In discussing the title of the articles, one participant said that she did not like the draft title – *Is your child being psychologically manipulated*. She felt it to be too powerful, and pointed out that it may be confused with other matters like sexual manipulation. In suggesting an alternative title she said: “Psychologically, it is such a big area. Maybe, *Is your child being manipulated by advertising*, or something like that.” Another participant agreed that this suggested title was clearer-cut. The suggested title was therefore used in the information campaign.

One participant found the title – *Sustainable Consumption: It is “Cool” to care about people we will never met* – to be confusing. She said: “I had to read it a couple of times to understand what it means”. Another found the title – *Do Your Children Need More Things or More Time with You?* – to be guilt-laden. These titles were hence discarded and alternative titles sought.

Another pointed out that the provision of references would enhance believability of claims made in the article. Considering this suggestion, final versions of the campaign articles were provided with references. The campaign articles were finalised with editorial comments provided by Dr. Joanna Goven.

An additional three trial interviews were conducted with three other individuals on 27 October, 2 November, and 7 November 2005, before the research instrument was finalised.

In summary, the pre-testing of the campaign articles with nine individuals as described above was instrumental in identifying areas that were potentially problematic and in refining the articles. The eleven trial interviews helped identify questions in the research instrument that were difficult to understand and those that were open to misinterpretation. In addition, participants in the trial interviews provided suggestions for the re-wording of some questions.

6.3.4 Testing campaign impact: A quasi-experiment

A range of available impact assessment methods for the purpose of evaluating training and education programmes and awareness raising interventions were provided in Chapter 3 of this thesis. Considering its advantages when compared to others available, the *controlled quasi-experimental method* was employed in the present case study to test if the information campaign on sustainable consumption (i.e. the treatment) caused a change in views about consumerism; understanding and perceptions about sustainable consumption; and, views and awareness about commercial advertisements (i.e. the dependent variables). As will be discussed in further detail below, this method was regarded to be the most appropriate as it addresses some of the problems of conducting experiments in real-world setting. The following paragraphs also point out the limitations of this method and steps taken to address these limitations.

Although regarded as highly effective, such experimental designs are not commonly used in field studies of media effects (Cook and Campbell 1979). Experimental and statistical controls are especially difficult to implement in such studies (Fetler 1984). Even quasi-experimental methods are rarely used in evaluating the effects of information campaigns (Syme and Seligman 2000).

Nevertheless, the experimental approach may be gaining prominence in mass communication research considering its use in recent academic and journalistic research⁸².

Considering the lack of random assignment, the experimental method used in this study falls more accurately in the quasi-experiments category as described by Cook and Campbell (1979: 6), that is, “experiments that have treatments, outcome measures, and experimental units, but do not use random assignment to create the comparisons from which treatment-caused change is inferred”.⁸³ In addition, quasi-experiments are an alternative to laboratory controlled experiments because researchers are “trying to identify the consequences of social changes in naturalistic contexts” (Cook and Campbell 1986: 141). Quasi-experiments are similar to “random-assignment experiments in all respects except that the various treatment groups cannot be presumed to be initially equivalent within limits of sampling error” (*ibid*: 142).

When experiments are conducted in isolation, as is sometimes possible within a laboratory, all other variables, with the exception of the independent variable, may be held constant. Since it can be ensured that the outcome of the experiment was not affected by any other factors, a definitive statement of causation can be made that it was the treatment that caused the outcome. In the social sciences, while some regard such control as an important trait of a good experimental design (Leary 1991), others have consistently criticised true experiments “on the grounds that the price of trying to control all sources of variation except the one that the researcher is deliberately manipulating (the independent variable) is artificiality” (Knight 2002: 75-76). In the field of social sciences, the experimenter “is trying to answer causal questions in more complex social settings where the entities being studied are clearly amenable to change for reasons that have nothing to do with the experiment” (Cook and Campbell 1979: 103).

Research conducted in real world settings are thus subject to a variety of extraneous variables. In social experiments, Brace *et al.* (2003) refer to these variables as *irrelevant variables*, two of which include *participant variables* and *situational variables*. They observed that it is often impossible to hold irrelevant variables constant, and when irrelevant variables “change systematically across conditions” they become confounding variables in the experiment (*ibid*: 3). Therefore, statements of causation in social experimental research conducted in a natural setting, as was the case in this

⁸² See for examples, Arpan and Raney 2003; Cooper and Nownes 2004; Joohoan 1997; Simon 1997; and, Vazquez 1997.

⁸³ This definition of quasi-experiment appears to be most commonly featured in academic texts. For example Leavitt (1991: 289) and Wimmer and Dominick (2000: 222) defined quasi-experiment as an experimental design in which subjects are not randomly assigned to groups. This is differentiated from another definition of quasi-experiment provided by Kantowitz, Roediger III and Elmes (1994: 559) – “An experiment in which the independent variable occurs naturally and is not under direct control of the experimenter.”

study, may only be made with a lesser degree of certainty in comparison to laboratory controlled experiments.

In this study, several possible irrelevant variables were identified. A *situational variable* with a high potential to become confounding was exposure to other mass media content (television, radio, newspaper and magazines) which may convey similar information as the information campaign under study. *Participant variables* with potential to become confounding included environmental values; attitudes towards shopping; and pre-existing knowledge and views concerning the three dependent variables under study. While recycling is the most commonly referenced indicator of environmental behaviour, Ozanne *et al.* (1999) included green consumerism and membership of environmental organisation as indicators of environmentalism in their study. In this study, recycling behaviour; composting behaviour; environment friendly / ethical shopping choices; membership of environmental organisations; and, prioritisation of environmental policy when voting were used as indicators of pre-existing environmental values.

Tauber (1972: 46) theorised that “peoples’ motives for shopping are a function of many variables, some of which are unrelated to the actual buying of products” – these include satisfaction gained from the shopping experience as well as satisfaction from utilisation of a purchased product. Lawson *et al.* (1996: 579) reported that “hedonic aspects of shopping are important to many Australian and New Zealand consumers.” Attention is often “focused on the fun, emotional, sensory stimulation, fantasy and amusement elements” of the shopping experience (*ibid*: 579). Attitudes towards shopping in this study were hence determined based on three perspectives; one, if happiness gained from purchasing products was expressed as a reason for purchase; two, the act of shopping as a pastime; and three, the enjoyment of shopping.

In this research it was not possible to either control or hold constant the range of possible extraneous and irrelevant variables. For example, it was literally impossible to control participants’ exposure to other media content during the experimental treatment. A *no-treatment concurrent control*⁸⁴ was instead employed as a measure of addressing potentially confounding variables. An attempt was made to establish a degree of equivalency between the experimental and control groups by ensuring that participant and situational variables did not significantly differ between the groups at the pre-treatment stage. Such pre-existing equivalency is an important requirement in all experiments, since “only then can observed effects be confidently attributed to the independent variable as opposed to pre-existing differences between the groups” (Leary 1991: 129). In this study, sampling was continued until both control and experimental groups had a balanced number

⁸⁴ Concurrent controls include respondents who partake in an experiment but do not receive the experimental treatment (Berry 2006). These respondents need to be “as similar as possible to those who receive the experimental therapy” since their purpose is to “serve as a comparison group for assessing the benefit of the experimental therapy” (*ibid*: 34).

of people in terms of differing environmental values, attitudes towards shopping and levels of exposure to mass media. As questions addressing these aspects were largely structured, an ongoing count of numbers was feasible, as sampling and interviews progressed. However, an immediate estimation of the degree of similarity in terms of pre-existing understanding and views concerning the three dependent variables under study was not feasible at the time of sampling, considering that interviews would first need to have been transcribed and coded prior to statistical analysis. Comparability between control and experimental groups for these variables were determined only at the data analysis stage (see Section 6.4.2).

In addition, an attempt was made to ensure that the control and experimental groups did not differ in terms of other *participant variables* such as gender, age, partnership status, parental status, education, employment status and income. In the sampling process, when it was observed that the number of female respondents was exceeding the number of males, the researcher actively sought to increase the number of male respondents, by specifically asking for a male respondent when there was a choice in the household. At another point it was found that the number of respondents below the age of thirty was lacking; likewise, an attempt was made to increase respondents in the lower age categories. When younger-looking individuals were located, even if they declined participation, the researcher made a verbal appeal explaining that the number of respondents in their age group was lacking and that they would be of great help if they participated. This strategy was found to be quite effective in encouraging participation.

6.3.5 Medium of campaign implementation

The campaign was implemented via a community newsletter, the St Albans Neighbourhood News (STANN) in Christchurch. STANN is a non-profit newspaper that is distributed free to 5,000 households and businesses in the St Albans suburb of Christchurch. STANN is published monthly, eleven times a year, excluding January. The campaign articles were published in three subsequent issues of STANN⁸⁵.

The engagement of a community news media in this study offered some methodological advantages. The distribution of STANN within a particular boundary enabled a controlled experimental evaluation. In addition, the editor's active participation and support facilitated the implementation process and enabled publication of the campaign articles without editorial interference. Two full pages were allocated for the articles and the first two sets of articles in issues 133 and 134 were free of advertisements on the same page.

⁸⁵ These were – Issue 133 (December 2005, Vol.12. Number 11), Issue 134 (February 2006, Vol.13. Number 1), and, Issue 135 (March 2006, Vol.13. Number 2).

6.3.6 Development of the evaluation instrument

The evaluation instrument used in this study (Appendix 13) was a set of standardised interview questions that measured understanding and views pertaining to the dependent variables under study.

A preliminary review of literature identified a report by Gomes *et al.* (1998: 27) that examined the “impact of advertising on the quality of human experience” that was of relevance to this research. Three interview questions from Gomes *et al.* – “Are you exposed to much advertising in your life? How does that make you feel? Can you think of a specific ad that you had a strong reaction to?” (*ibid*: 27) – were adapted for use in the present evaluation instrument. Gomes *et al.* suggested that the neutrally-worded questions ensure that participants are offered the opportunity to provide both negative and positive remarks about their experiences with advertisements.

The initial literature review, however, did not produce any publications describing evaluation instruments for understanding of sustainable consumption or views about consumerism. Although the *Revised New Environmental Paradigm Scale* (Dunlap *et al.* 2000), the *Values-oriented Materialism Scale* (Richins and Dawson 1992) and the *Materialism Scale* (Belk 1985) were considered, these scales were inappropriate for the purpose of this study. Geno (2000) developed the *Ecologically Sustainable Development Paradigm Scale* (ESDP) – an attitude measurement scale that included items concerning anthropocentric values such as intergenerational equity and biocentric values such as intrinsic value of the natural environment and nature protection. Items in the ESDP scale were however, not applicable in this study, as they did not directly relate to sustainable consumption.

The majority of evaluation questions were therefore developed based on aspects of sustainable consumption, consumerism and advertising that were discussed in the campaign articles. To gain both quantitative and qualitative data, the evaluation instrument consisted of open-ended questions, and structured questions with multiple answer options or Likert-type response scales which were presented to interview participants in the form of answer cards. Open-ended questions, however, were minimised, considering the difficulties in coding resultant answers. In addition, open-ended questions may sometimes pose difficulties if respondents do not mention a particular point simply because they had not thought about it at the time of answering the question (Rodeghier 1996).

Noting the lack of established measurement instruments to measure understanding of sustainable consumption, the Likert-type scales used in this research were regarded as a pilot test on the effectiveness of such scales as a measurement tool for this purpose. The original purpose of the scale developed by Rensis Likert was for the measurement of psychological attitudes and has been conventionally used for the purpose of attitude measurements, based on a level of agreement or

disagreement to target statements. In this study, the usage of the Likert scale method was extended to the measurement of understanding and views. In contemporary research, it has become common to apply the Likert evaluative method to areas other than attitude⁸⁶.

Limitations in the time-frame of this research prevented the development of an actual Likert scale using the elaborate methodology described in literature⁸⁷. Instead, the scale used in this study may be referred to as a *Likert-type scale* or more cautiously as a *summated rating scale*, as described by Uebersax (2006). Although the scale used in this study resembled a Likert scale, it did not meet two of the six Likert scale characteristics that Uebersax described. One, the large font size used in the answer cards to enhance readability meant that the response levels were arranged vertically rather than horizontally. Two, the answer options that respondents were provided were not bivalent and symmetrical with a neutral midsection, since a sixth response option, 'I don't know' was added to the scale (reasons for this addition are discussed in Section 6.3.8). In addition, the conventional response options of a Likert scale – strongly disagree; somewhat disagree; neither agree nor disagree; somewhat agree; strongly agree – was modified for the purpose of this research. To make it clear to the respondent that the objective of the research was to find out the extent to which the statements reflected their personal views, the following response scale was used instead:

- 1 My view, strongly agree
- 2 Mixed view, agree more than disagree
- 3 Completely neutral
- 4 Mixed view, disagree more than agree
- 5 Not my view, strongly disagree
- 6 I don't know

Although the minimum number of items to qualify a scale was not clearly identified in literature, Robson (2002) observed that a Likert scale typically consists of 20-30 items. In this study, the scales used consisted between 3 and 5 items. For some variables, single Likert-type statements were used as a tool of measurement in place of scales.

⁸⁶ For example, Likert-type scales have been used in the measurement of training impact (Othman 2005), symposium impact (Taylor 2004), literacy (Hameed 1988) and knowledge (McQuiston *et al.* 2002; Rocha 2005).

⁸⁷ The objectives of developing a Likert scale “is to create a set of items whose combination provides the best measure of differences among respondents on the underlying concept” (Singleton *et al.* 1993: 400). In the development of a Likert-scale, first, a large number of statements that support or oppose the underlying concept are written (Knight 2002; Leavitt 1991; Robson 2002; Singleton *et al.* 1993). Second, although not always done in scale construction, the statements are pre-tested to identify and eliminate statements that are ambiguous (Singleton *et al.* 1993). Third, “a subset of items that best discriminates among persons who hold different attitudes” is selected (*ibid.*: 400-401). In making this selection, the researcher would need to administer the initial item set to a sample of respondents who are similar in characteristic to those for whom the scale is intended (*ibid.*). Knight (2002), Leavitt (1991) and Robson (2002), suggested that this group should be a representative sample from the target population. In addition, Leavitt (1991) suggested that such pilot testing should be done with at least 100 randomly chosen subjects. Each statement is “subjected to a measurement of its discriminative power” which is its power to discriminate between the scores of the upper and lower quartiles of respondents (Robson 2002: 294). The final set of statements is then tested for reliability and validity (Singleton *et al.* 1993).

6.3.7 Research hypotheses and processing of measurement variables

(i) Measurement of views about consumerism

An open-ended question that asked respondents about their personal views on consumerism served as a first measurement of views about consumerism. Responses were coded to a 5-point scale (1–*completely positive*, 2–*mainly positive, with some negative*, 3–*neutral*, 4–*mainly negative, with some positive*, 5–*completely negative*.) The hypothesis (H_1) was that the experimental group would have increased negative views about consumerism, at the post-campaign stage. In order not to influence responses, a brief explanation of consumerism (excessive purchasing of non-need items) was provided only in cases where a respondent requested clarification. It was observed that in all instances respondents associated consumerism with ‘materialism’ or ‘a shopping culture’. None associated consumerism with its other meaning – ‘the protection of consumer rights’.

Respondents were then requested to provide a level of agreement or disagreement to a Likert-type scale that consisted of seven items (some depicting positive attitudes towards consumerism and some negative⁸⁸) as follows:

- 1 Increase in consumerism is a good thing because it boosts economic growth
- 2 Increase in consumerism is not a good thing because it contributes to social inequality
- 3 Consumerism keeps people happy
- 4 Consumerism contributes to various types of stress in society
- 5 Consumerism contributes to waste and pollution
- 6 Although consumerism contributes to waste and pollution, new technologies will help deal with these problems
- 7 A good solution for waste and pollution problems is moderate consumerism

The first five items on the scale were summed to form a – *views about consumerism scale* – which was used as a second level of measurement of views about consumerism. The levels of agreement and disagreement were coded to a 5-point scale (1–*very positive* to 5–*very negative*). Statements 2 and 3 were reversed coded to fit the scale. The hypothesis (H_2) was that the experimental group would exhibit a higher score in this scale, at the post-campaign stage, demonstrating increased negative views about consumerism.

The sixth statement in the scale served to show respondents’ belief in technological solutions. It was hypothesised (H_3) that in comparison to the control group, the experimental group would exhibit an increased level of disbelief in technological solutions to waste and pollution, at the post-campaign stage. The seventh statement served to show respondents’ belief in moderate consumerism as a solution to waste and pollution. The hypothesis (H_4) was that the experimental group would show increased belief in moderate consumerism as a solution to waste and pollution, at the post-campaign stage.

⁸⁸ Statements in Likert scales are often ‘reversed’ to prevent respondents from mindlessly ticking answers (Knight 2002).

As a fifth measurement, respondents were asked in an open-ended question if they thought New Zealand could be categorised as a consumerist society. Responses were coded as a 3-point ordered-category scale (1–*absolute disagreement*, 2–*agreement to some degree*, 3–*absolute agreement*). The hypothesis (H₅) was that the experimental group would score higher in this scale, at the post-campaign stage, indicating an increased tendency to regard New Zealand as a consumerist society.

A final open-ended question required respondents to express what they thought drove consumerism in New Zealand society. Each identified factor was coded as a dichotomous variable. The hypothesis (H₆) was that the proportion of respondents identifying advertisements as a driving force of consumerism would increase within the experimental group, at the post-campaign stage.

(ii) Measurement of understanding and perceptions about sustainable consumption

This section of the interview began with open-ended questions that asked participants if they were familiar with the term ‘sustainable consumption’ and what it meant to them. The keyword system of quantifying understanding of sustainability was then used to evaluate change in understanding of sustainability. As detailed in Chapter 4 this system for measuring understanding of sustainability was developed after a review of related literature found no previously established measurement instruments that might be used for this purpose. Its use in the second case study of this research appeared instrumental as it provided a way for statistically measuring change in understanding. Its use in the third case study in Chapter 5 provided a measurement of degree of understanding. The use of this method in this research provides a pilot assessment of its reliability as a measurement tool; its further testing in other contexts is recommended.

Using the OECD (2002) definition of sustainable consumption⁸⁹ and other details that were provided in the campaign articles, a respondent’s level of understanding was graded based on the number of key concepts⁹⁰ provided in his or her explanation. Responses were coded to a 7-point scale (1–*no understanding*, 2–*vague understanding* (a vague idea of the term, but no key concepts), 3–*one key concept*, 4–*key concepts*, 5–*three key concepts*, 6–*four key concepts*, 7–*five key concepts*), referred to as the – *sustainable consumption: degree of understanding scale*. The

⁸⁹ The OECD (2002: 9) had defined sustainable consumption as follows: “The use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life-cycle of the service or product so as not to jeopardise the needs of future generations.”

⁹⁰ Key concepts were: ‘meeting basic needs;’ ‘minimising unnecessary consumption;’ ‘needs of future generations;’ ‘life quality;’ ‘well being;’ ‘reducing pollution;’ ‘reducing waste;’ ‘renewable resources;’ ‘equality;’ ‘fair trading;’ ‘energy efficiency;’ ‘material efficiency;’ and ‘locally grown’.

hypothesis (H₇) tested was that the experimental group would obtain higher scores in this scale, at the post-campaign stage, exhibiting an increased degree of understanding.

Participants were then required to respond to a set of six Likert-type items. The following three items were summed to form a *sustainable consumption principles awareness scale*:

- Sustainable consumption helps bring about social equality
- Sustainable consumption helps reduce environmental problems like waste and pollution
- Sustainable consumption means that things are produced more efficiently

The levels of agreement and disagreement to the above statements were re-coded to a 5-point scale, (1–*low awareness* to 5–*high awareness*). The hypothesis (H₈) was that the experimental group would show an increase in score for this scale, after exposure to the campaign – exhibiting an increased level of awareness about the underlying principles of sustainable consumption.

The other three items, noted below, were summed to form a *sustainable consumption prioritisation scale* that measured views about the level of prioritisation that ought to be given to sustainable consumption.

- Economic growth should be prioritised over sustainable consumption
- Ensuring a wide range of products in the market should be prioritised over sustainable consumption
- Assurance of cheaper products for consumers should be prioritised over sustainable consumption

The levels of agreement and disagreement to the above statements were re-coded to a 5-point scale (1–*low prioritisation* to 5–*high prioritisation*). The hypothesis (H₉) tested was that, the experimental group would have a higher score for this scale, at the post-campaign stage, demonstrating an increased level of prioritisation attributed to sustainable consumption.

In the process of the interview several limitations were found for the above two Likert-type scales, including ‘non-attitude reporting’ and ‘uninformed responses’. Statistical analysis was thus conducted in two scenarios: analysis that included all responses provided regardless of the possibility of ‘uninformed responses’ or ‘non-attitude reporting’, and analysis using filtered data. The open-ended question, “What does the term sustainable consumption mean to you?” was used as a filter question to remove respondents with no understanding of sustainable consumption from the analysis of the Likert-type scales. Responses to Likert-type scales from these individuals were treated as missing values. Results obtained using filtered and unfiltered data are presented separately for H₈ and H₉, as shown in Table 6-9.

As a final measurement, respondents were asked an open-ended question about the need for more prominent policies on sustainable consumption in New Zealand. Responses were coded to a 3-point ordered-category scale (1–*definite no*, 2–*maybe*, 3–*definite yes*). It was hypothesised (H₁₀) that

there would be an increase in the proportion of individuals within the experimental group, indicating a *definite* need for sustainable consumption policies, at the post-campaign stage.

(iii) Measurement of views about advertising; awareness about how commercial advertisements work; and, concerns over advertising effects on children's consumerism

As a first measurement of views about advertisements, this section of the interview began with open-ended questions that asked respondents how they felt about the advertisements that they were exposed to, and if they could think of one that they had reacted strongly to. Responses were coded to a 5-point scale (1–*completely positive*, 2–*mainly positive with some negative*, 3–*neutral*, 4–*mainly negative with some positive*, 5–*completely negative*). It was hypothesised (H_{11}) that in comparison to the control group, the experimental group would have increased negative views about advertisements, at the post-campaign stage.

As a second measurement of views about advertisements respondents were asked if they thought commercial advertisements were effective in influencing people's purchase decisions. They were asked to choose from a 4-point ordered-category scale (1–*never*, 2–*rarely*, 3–*sometimes*, 4–*often*). The hypothesis (H_{12}) was that the experimental group would exhibit an increase in score for this measurement item at the post-campaign stage, indicating a change in view that the effects of advertising were more severe than earlier perceived.

Using the same measurement scale as above, respondents were then asked if they thought commercial advertisements had an influence on their own purchase decisions. It was hypothesised (H_{13}) that the experimental group would exhibit an increase in score for this measurement item at the post-campaign stage.

Then, in an open-ended question, respondents were asked how they thought commercial advertisements influenced purchased decisions. This question served as a measurement of respondents' awareness about the use of consumer psychology and emotional appeals in advertisements. Factors provided were coded as dichotomous variables. It was hypothesised that the experimental group would have heightened awareness about the use of consumer research and psychology in advertising (H_{14}) and heightened awareness about the use of emotional appeals in advertising (H_{15}) at the post-campaign stage.

Finally, respondents who had dependent children, or grandchildren they regularly interacted with, were asked in an open-ended question to indicate how their children or grandchildren were affected by media contents that they were exposed to. This question served to evaluate if parents were aware of and/or concerned about the effects of advertising on their children's materialism.

Responses were coded as dichotomous variables. The hypothesis (H_{16}) was that the number of parents who express concern over how advertising increases desire for consumer products in their children, would increase in the experimental group, at the post-campaign stage.

6.3.8 Anticipated problems in the research instrument and precautionary measures

According to Rodeghier (1996) while most survey respondents are likely to be familiar with the topic of the survey, not all questions would be relevant to every single individual under survey; hence, there are likely to be items about which an individual may genuinely have no opinion about. Van Es *et al.* (1996) noted that the number of respondents with unclear opinions “may increase when measuring a public concern, such as an environmental issue, in which societal consensus has not been reached, and [about which] information may be difficult to obtain.” For topics where there are likely to be a lack of public knowledge or awareness, some have suggested the necessity to provide response options for those who genuinely do not know the answer (Rodeghier 1996; Schuman and Presser 1981).

Another anticipated problem was *uninformed response error* (Hawkins and Coney 1981) or *non-attitude reporting* (Krosnick *et al.* 2002) where respondents provide opinions about areas in which they have no prior knowledge. In reviewing earlier works of Phillip Converse⁹¹ on non-attitude reporting, Krosnick *et al.* (2002: 372) noted:

When confronted with a question on a topic to which one has devoted no previous thought, the natural inclination would presumably be to acknowledge having no opinion on the matter. But when confronted with a long sequence of such questions on diverse issues...most people will probably be uncomfortable repeatedly acknowledging what might appear to be wide-ranging ignorance. Therefore...respondents may cope by randomly selecting responses from among the choices offered in order to appear opinionated.

Anticipating the above problems, in this study, an additional answer option, ‘I don’t know’, was added to the five-point Likert-type response scale, as a precautionary measure in addressing the possibility of a genuine lack of opinion among respondents, and to prevent *uninformed responses* to Likert-type statements concerning sustainable consumption in particular.

While Ma (1998) lumped together ‘undecided’, ‘no opinion’ and ‘don’t know’ as neutral answers in Likert type scales, this study differentiated the answer option ‘neutral’ from ‘don’t know’. In statistical analysis the ‘don’t know’ answers were treated as missing values in the scale, but categorised as a separate dichotomous variable, considering the possibility of pre-to-post change in understanding. In other words, a change from *a complete lack of understanding* (I don’t know) to

⁹¹ Converse, P. E. (1964) The Nature of Belief Systems in Mass Publics. In: D.E. Apter (ed), *Ideology and Discontent*. New York: Free Press. pp. 206-261; Converse, P. E. (1970) Attitudes and Non-Attitudes: Continuation of a Dialogue. In: E.R.Tufte (ed), *The Quantitative Analysis of Social Problems*. Massachusetts: Addison-Wesley Publishing Company, 168-189.

some degree of understanding. Van Es *et al.* (1996: 17) pointed out the advantage of the ‘don’t know’ response option in environmental opinion surveys:

Rather than serving as a nuisance or a statistical anomaly, the response of *don’t know* on a community survey provides meaningful insights into how residents perceive the quality of their environment. *Don’t know* responses provide information to substantiate the fact that certain environmental issues, although identified by community leaders as important, have not received a public “airing” in the community and that many community residents have not yet formed an opinion on these matters.

According to Krosnick *et al.* (2002), very little research has been conducted to generate techniques to prevent *non-attitude reporting* in surveys. Hawkins and Coney (1981) noted that the causal factors of *uninformed responses* have not been well addressed empirically or theoretically. Nevertheless, Hawkins and Coney suggested that a logical assumption would be that factors that are known to increase response rates such as interest in the topic of investigation, social pressure in the form of interviewer presence, monetary incentives, and follow up contacts may increase the rate of uninformed responses. In addition, respondents may tend to provide uninformed responses because of an ‘implied knowledge expectation’ that they see in the invitation to participate, in the questionnaire, or in a question itself (*ibid.*). “To an extent, simply asking someone a question implies that the questioner expects the respondent to have an answer” (*ibid.*: 371).

As monetary incentives or follow-up contacts were not used as a method to encourage participation in this research, it was assumed that causes of uninformed responses in this study are likely to be related to interest in the topic, social pressure (interviewer presence) and an implied expectation of knowledge. Implied expectation of knowledge was inevitable in questions related to sustainable consumption, as the objectives were to measure levels of understanding. However, to reduce the pressure of ‘implied knowledge expectation’ and subsequent uninformed responses, in situations where the respondent was suspected to be undergoing such pressure, an attempt was made to reduce that pressure, by letting the respondent know that it was acceptable to choose the ‘don’t know’ answer option. To prevent possible feelings of embarrassment in the respondent, it was pointed out to them, how other respondents were often in a similar situation of not knowing much about sustainable consumption.

Quite similar in context with *implied knowledge expectation*, Sterngold *et al.* (1994) described *presuppositions* about respondents as a problematic area in survey research. Because presuppositions are inherent in human communication, the authors noted that it may be impossible to design survey questions that are free of them; however, they suggested that one method of overcoming the problem would be to use “a filter question to determine if respondents have a particular concern before asking them to indicate their degree of concern” (*ibid.*: 262). In the same way, Malhotra *et al.* (2002) suggested that ‘filter questions’ enable the filtering out of uninformed participants from the research.

In this study, asking respondents what the term sustainable consumption meant to them, may suggest that the question ‘presupposes’ that they have existing knowledge of the term. To defuse this element of presupposition, in the interview process, respondents were first asked if they were familiar with the term sustainable consumption, in a preceding question. However, this preceding question was not used as a ‘filter’ in the sense described by Sterngold *et al.* (1994) and Malhotra *et al.* (2002). This preceding question instead served as a method to defuse implied knowledge expectation, as it provided respondents with the opportunity to indicate if they were familiar with the term from the very start. Schuman and Presser (1980: 1218) suggested the use of filter questions that first asked “whether the respondent had an opinion on the issue and asked the agree-disagree question only of those who had answered affirmatively.” In this study, however, noting the possibility that respondents may indicate uncertainty or unawareness simply because of a belief that they will not be able to define ‘sustainable consumption’, respondents were asked the subsequent question, “What does the term sustainable consumption mean to you?” even when they indicated they were not familiar with the term in the preceding question. It was expected that this method of questioning would provide a clearer indicator of the degree of understanding of the term.

However, a respondent’s inability to articulate understanding of sustainable consumption was not taken to be a definite indication of their non-understanding. Noting the possibility of articulation inability and to maintain the standardisation of the interview process, respondents were asked to respond to the subsequent Likert-type evaluative statements that further measured understanding of sustainable consumption and its perceived importance, despite the risk of uninformed response error.

6.3.9 Direct measurements of campaign effect

As a direct measurement of campaign effect, firstly, at the end of each section in the interview that measured the three key areas of dependent variables, respondents were asked to identify from a list of factors those that contributed to their views and understanding. If a respondent mentioned ‘community newsletter / newspaper’ as a factor, the respondent was handed a second answer card consisting a list of three community newspapers / newsletters known to be distributed in the St Albans suburb (one of which was STANN), and asked to identify which ones.

In addition to the above, self-reported data on campaign effects⁹² was collected at the post-campaign stage. Singleton *et al.* (1993: 106) pointed out that although ‘self-reports’ may be used to

⁹² In this research, self-reported data on campaign impact was defined as respondents’ reports about their changes in views and understanding, as a result of exposure to the campaign information. Such data is commonly referred to as ‘verbal reports’ or ‘self-reports’ (Singleton *et al.* 1993) and within specific fields referred to as ‘introspective data’ (Leavitt 1991), or ‘retrospective data’ (Shadish *et al.* 2002).

measure “subjective experiences, such as knowledge, beliefs, attitudes, feelings, and opinions”, the use of self-reported measures versus observational measures, is subject to debate within experimental designs. Although the self-reported measure offers “the advantage of being easy to devise, allowing for more numerous and varied assessments of the dependent variable” such a measure tends “to be high in face validity” (*ibid*: 194). A major problem encountered in self-reports is respondents’ tendency to censor their responses (*ibid*.).

In this research, however, self-reported measures served only as an addition to observational measures in which judgement about campaign impact was determined by examining pre-to-post changes. Self-reports were requested at the end of the post-campaign interview, so as not to bias preceding answers. Respondents were first asked to self-report any changes in their views and understanding over the preceding four months by choosing from a 3-point ordered category scale – *big change*, *minor change* or *no change*. In cases where a major or minor change was reported, respondents were asked to articulate what caused the change. Campaign effect was coded as a dichotomous variable – i.e. ‘did’ or ‘did not’ mention the information campaign in STANN. The number of respondents in the experimental group who mentioned the information campaign was noted as a second direct measurement of campaign effect.

To measure exact exposure to the campaign, respondents were then asked, if they had read any of the campaign articles. To facilitate recall, respondents were shown the STANN issues containing the articles. Respondents who reported having read the articles were asked to indicate if the articles had an impact on what they expressed on the three topics of the interview by choosing from a 3-point ordered category scale (1-*Yes, very much*, 2-*Yes, a little*, and 3-*No*).

6.3.10 Measurement of possible impact on behaviour

To test for possible impact on behaviour, in an open-ended question, participants were asked if there was anything that they wished they could change about their shopping behaviour. Responses were coded as dichotomous variables. Any pre-to-post changes would provide an indication of change in behavioural intentions, and hence a possible impact on behaviour.

6.3.11 Measurement of interview effects

Interview effects were assumed to be a possible confounding variable in this study. At the pre-campaign interview, several participants indicated an intention to check up the meaning of sustainable consumption. Some had eagerly questioned the researcher about its meaning. In such cases, the researcher explained that she was not able to discuss the term as it would bias the interview process. She assured respondents that she would answer any questions they may have upon completion of the second interview. This alerted the possibility of interview effects that may

pose a threat to internal validity of the evaluation, considering that the pre-campaign interview may have heightened curiosity or interest in participants. Referring to such effects as “testing effects”, Wimmer and Dominic (2000: 34) cautioned:

pretest may sensitise subjects to the material and improve their posttest scores regardless of the type of experimental treatment given to them. This is especially true when the same test is used for both situations. Subjects learn how to answer questions and to anticipate researchers’ demands. To guard against the effects of testing, different pretests and posttests are required.

Ironically, however, the use of differing pre and post evaluation instruments contributes to another type of threat to internal validity referred to as *instrumentation effects*. Instrumentation effects may occur when there is a change in measuring instrument, over time or across conditions, causing an effect that may be confused to be a treatment effect (Cook and Campbell 1979; Shadish *et al.* 2002; Malhotra *et al.* 2002). Therefore, in contrast to Wimmer and Dominic’s (2000) suggestion to use varying pre and post evaluation instruments, the constancy of the measurement instrument in this research was maintained. However, three additional questions were included in the post-campaign interview to determine interview effects. Respondents were asked if the first interview triggered an interest to acquire more information; if the first interview increased their alertness to the topics; and if they had discussed the topics with anyone. It was assumed that interview effects consistent across conditions, i.e. occurring both within the experimental and control groups, would mean a lesser degree of treatment effect contamination.

6.3.12 Sampling method and approach

(i) Recruitment method and approach

Participants were recruited via a door-to-door approach. At the point of introduction, the researcher identified herself and provided a brief explanation of the research. When an individual expressed willingness to participate, he or she was provided with an information sheet to read and a consent form to sign. Depending on the individual’s time availability, the pre-campaign interview was either conducted on the same day or an appointment was made for another day. At the end of the campaign period, respondents were contacted via phone to schedule post-campaign interviews. Pre-campaign interviews were conducted from 9 November, 2005 to 14 December, 2005 and post-campaign interviews from 4 April, 2006 to 15 May, 2006.

(ii) Unavoidable deception and appeasement measures

Demand characteristic and *evaluation apprehension* may cause respondents to provide answers based on what they think the experiment is supposed to have on them, and may also cause respondents to provide answers that would show them in a better light (Wimmer and Dominic 2000). Orne (1969) has observed that in an experimental situation there can be a range of cues that may influence participants’ perception through direct or indirect communication about what is

expected of participants or what is desired by the experimenter. In a preceding publication, Orne (1959 *cited in* Orne 1969) referred to such cues as *demand characteristics* of the experimental condition. Under some circumstances, participants' awareness about the experiment or its purpose may be the principal determinant of how they perform (Orne 1969). Participants' degree of concern about the outcome, their perception of their role and of the experimental hypothesis can significantly determine their behaviour (Orne 1969). Therefore subjects' knowledge of being part of an experiment and their "expectations of how they are supposed to behave may greatly determine their performance in the experiment" (Kantowitz *et al.* 1994: 398). In addition, a respondent's awareness about the data that is to be generated may cause the respondent to "wish to produce good data, that is, data characteristic of a good subject", therefore, "he will tend to behave in such a way as to make himself look good" (Orne 1969: 145). This aspect in behavioural research is referred to as *evaluation apprehension*, a term originated by Rosenberg in the early 1960s (Rosenberg 1969). Evaluation apprehension, as described by Rosenberg is an 'anxiety-toned concern' experienced by respondents over gaining positive appraisal from the experimenter, or in the least not providing the grounds for a negative appraisal.

Demand characteristic and *evaluation apprehension* pose a threat of becoming confounding variables and hence has internal validity implications (Wimmer and Dominic 2000). To avoid these potential threats, participants in this study, were not informed of the actual objective of the research, i.e. to evaluate the impact of the information campaign on participant's views and understanding of related issues. They were thus not informed about the upcoming campaign or the experimental nature of the research at the pre-campaign interview. Instead, they were told a half-truth, that the objectives of the interview was to evaluate community understanding and views about sustainable consumption, consumerism and commercial advertising. Since the research aimed to make an enquiry involving people in a 'real life' situation, this deception was unavoidable. Orne (1969), however, cautioned that deceptions such as disguising actual objectives of research do not guarantee that participants are in fact deceived. Whatever the case may be, in this research, informing participants about the campaign and disclosing the actual objectives of the research, may have encouraged participants to pay more attention to the campaign articles than they would have under normal circumstances. Consequently, this may result in better recollection and understanding of the campaign articles and hence cause a bias in observed treatment effects. In other words, participants may study the campaign articles, in order to perform better at the post-campaign interview.

As an appeasement measure, at the end of the post-campaign interview, all participants were informed about the nature of the experiment and reasons why they were not informed about the campaign or the actual objectives earlier. Although several participants in the experimental group were regretful that they had not read the article, all participants were receptive to the explanation.

In response to the possibility of participants' annoyance about being used as experimental subjects, and control group resentment about not receiving a useful treatment, Seligman and Hutton (1981: 65) reported that their experiences suggest that participants usually "understand the need for experimentation and generally react positively to the experience". They added that although the ethical issues concerning evaluation of conservation programmes are no different from other types of social experiments, such evaluations may be perceived as being ethically less severe. For instance, "the withholding of a potential energy conservation device is not in the same category of seriousness as withholding a potentially effective medicine from sick people" (*ibid*: 67).

Control group participants were informed about the campaign, the experimental research design and the reasons that necessitated a control group. It was explained to them how participants in the control group were of help in determining other factors in the 'real world' that may have contributed to understanding and views about the related issues, which in turn helps ascertain if changes in the experimental group were in fact due to the information campaign. While most control group participants accepted this as a logical reasoning, one participant expressed minor disappointment that she had missed the opportunity to learn. All control group participants and experimental group participants who had not read the articles were provided a photocopied set of the campaign articles at the end of the interview. Since all participants were appreciative of this, it was noted as a suitable method to add to the appeasement process.

(iii) Purposive sampling and measures to enhance representativeness

In this study, the assignment of respondents to experimental or control groups was dependent on whether or not they received and read STANN; hence, random assignment was not feasible. In any case, statistical generalisation was not a major aim in this study. Although this meant a lack of *external validity* in a statistical sense, the objective of this study was rather to investigate the relationship between variables in real world settings, i.e. the impact of the information campaign on people's understanding and views on the issues discussed in the campaign. Moreover, as Shadish *et al.* (2002) have observed, random sampling, although desirable, is rarely used in experimental research practice, because it is seldom and contingently feasible. Although *quota sampling*⁹³ was considered, the available *sample frame*⁹⁴ for the St. Albans population was inapplicable, which rendered this sampling method not feasible. Although Statistics New Zealand's community profile

⁹³ Quota sampling is a form of nonprobability sampling that is frequently used in public opinion polls; it is based on "the practice of assigning quotas, or proportions of kinds of people, to interviews" (Kerlinger 1973: 129). In this sampling method "knowledge of strata of the population – sex, race, region, and so on – is used to select sample members that are representative, "typical," and suitable for certain research purposes" (*ibid*: 129).

⁹⁴ A sample frame refers to "the complete list of elements of the population from which a sample will be drawn" (De Vaus 2002: 364).

for the St Albans area provided basic profiles on gender, age, education, ethnic groups, income, employment, family types and household spending, the boundary of St Albans as defined by Statistics New Zealand differed from boundaries defined by the St Albans Residents Association in which STANN was distributed. Furthermore, other population attributes that were critical for the research such as environmental values, environmental behaviour and related knowledge were not available.

Purposive sampling, a non-probability sampling method was identified as the most appropriate sampling method for this study. “A purposive sample includes subjects selected on the basis of specific characteristics or qualities and eliminates those who fail to meet these criteria” (Wimmer and Dominick 2000: 84). Therefore, purposive sampling is primarily based on the researcher’s judgement and selection of candidates who are best able to provide the needed information to achieve the research objectives (Kumar 2005; Bryman 2004). As this study was more interested in independent consumers, its sample did not include children and teenagers who were dependent on parents. Since the research concerned the relevance of sustainable consumption to New Zealand, holidaymakers and temporary visitors to New Zealand were not included. In addition to comprehension of the information campaign, a clear understanding of the interview questions was identified as important for accurate evaluation of the campaign impact. Although the research included participants with an average level of English, non-English speaking residents and individuals with a very poor command of English were excluded. In any case, it was observed that such individuals did not express an interest to participate.

In this study, diverse samples that consisted of a wide variety of people were purposively established, with lesser concern about representing each variety in its correct proportion as within the wider population. This type of purposive sampling method may be referred to as “purposive sampling of heterogeneous instances” as described by Shadish *et al.* (2002: 23) – a sampling method that aims to “include instances chosen deliberately to reflect diversity on presumptively important dimensions, even though the sample is not formally random.” Although purposive sampling, generally limits the statistical generalisation of findings to the population, the inclusion of a variety of people in this study reflected variety in society, hence providing a degree of *ecological validity*. According to Neisser (1976: 2) *ecological validity* is the extent to which findings from an experiment “has something to say about what people do in real, culturally significant situations.” George *et al.* (2003: 116) pointed out that in general “ecological validity is related to how closely the data and the experiment reflect the real world or natural setting” and that there is a tentative link between ecological validity and external validity. Some researchers regard ecological validity as a type of external validity (Czaja and Sharit 2003) while others contend that although the two forms of validity can be closely associated, they are independent in that one can exist without the other (Shadish *et al.* 2002).

In this study, although selection of participants was not random in a technical sense, several steps were taken to ensure that the sample collected would reflect diversity in society in order to enhance representativeness. Sampling was spread out throughout the suburb; respondents were recruited from thirty-five different streets in St Albans. Control group participants were recruited from households just outside of STANN's distribution boundary, or that had a 'no circulars' sticker on their mail boxes. In addition, sampling was done at different times of the day and over weekends, to ensure that the sample would consist of both workers, who tend to be home in the evening and weekends, and the retired or unemployed, who were more easily accessed during the day. In longer streets, houses were skipped to prevent clustering⁹⁵ of sample. To include a range of income groups, an attempt was made to gain samples from smaller flats that were likely to represent lower income groups, as well as townhouses and larger houses that were likely to represent middle and higher income groups.

Following the first interview, each respondent was sent a note of thanks. The researcher expressed appreciation for their time and participation, and indicated her intent to contact them again in April 2006. This was regarded as an important step not only in ensuring a higher retention of participation in follow-up interviews but also an important gesture of appreciation towards voluntary participation in research. Upon completion of all post-campaign interviews, a brief article was posted in STANN's May 2006 issue explaining the purpose of the information campaign. The article also identified the author, explained STANN's involvement, and ended with a note of gratitude to participants. Following an invitation from the editor, a brief summary of research results were published in STANN's February 2007 issue. Participants were again thanked for their contribution towards the research.

6.3.13 Interview method and approach

A structured interview method was employed to obtain both quantitative and qualitative data. For the measurement of dependent variables, identical questions were asked in the pre and post-campaign interviews, ensuring constancy of the measurement instrument across time.

⁹⁵ Czaja and Blair (2005: 54) had pointed out the disadvantage of clustering, or conducting more than one interview per block as follows: "People of similar characteristics (such as income, demographics, and attitudes) tend to live on the same blocks or in the same neighbourhoods. Thus, when we sample more than one respondent per block, we collect similar information for some variables. Think about it. People with similar incomes and lifestyles tend to have similar values and behaviors. A respondent may not be exactly the same as his neighbour, but he is probably more similar to them than he is to people who live on different blocks or miles away. Thus, when we do more than one interview per block, we are not capturing all the diversity in the same population".

Questions were read out to each participant in exactly the same words, ensuring constancy of the measurement instrument across conditions. Answer options, in the form of answer cards, were provided for structured questions. Questions were read out to respondents and answer cards handed out to them. For questions involving Likert-type scales, the answer cards consisted of the Likert-type statement together with answer options. This format was employed, following an outcome in the pre-testing process, in which a participant indicated that he found it more easy to understand the statements when he was able to read it himself. This format proved to be useful, as during the interview process, it was observed that respondents often took time to read the statements again and contemplated before providing an answer.

With permission from respondents each interview was digitally recorded and transcribed verbatim. Each interview lasted between 25 to 60 minutes.

6.3.14 Statistical analysis

In this study, although original sample sizes were 39 for experimental and 32 for control, data was measured using ordinal and nominal scales; hence, parametric assumptions were unmet. Therefore, non-parametric statistical tests were employed to analyse the variables under study.

Considering suggestions made by Curran-Everett and Benos (2004), exact p-values are provided in the presentation of results for this study. With exact p-values the strength of an effect can be evaluated. For example, in this study, exact p-values provided the possibility of communicating a p-value that exceeded the .05 level at the second decimal point as being different from a p-value that exceeded the .05 level at the first decimal point. When a p-value exceeds the .05 level at the second decimal point it may be interpreted as a minor, but statistically non-significant difference.

Taking into account Fukuda and Ohashi's (1997) suggestion, the lack of a statistically significant difference between two groups was not interpreted as an evidence of equivalency between the groups. Fukuda and Ohashi regarded this to be a commonly occurring statistical misinterpretation and pointed out that when the p-value exceeds 0.05, this does not mean "there is no difference", but only that "it cannot be determined whether or not there is an expected difference" (*ibid*: 123).

In this report, asymptotic significance⁹⁶ values were provided for statistical analysis conducted for demographic, situational and participant variables considering the fairly large sample size involved in the analysis. For other comparisons where the number of participants reduced within the

⁹⁶ Brace *et al.* (2003: 10) noted that "asymptotic significance is tested against an asymptotic distribution" and "the assumption that the underlying distribution is asymptotic" is made when there is a large number of participants. Asymptotic distribution means "that the tails of the distribution never meet the horizontal axis. The normal distribution is an example of an asymptotic distribution" (*ibid*: 10).

variables being compared, exact significant values were provided instead when this option was available. It is worth noting here that older versions of SPSS (Statistical Package for the Social Science) have limited options for calculating the Exact p-value. SPSS Version 13 used in this analysis provided the “Exact” test option as well as the “Monte Carlo Method” for larger samples.

6.4 Results and Discussion

6.4.1 Campaign exposure

Seventy-one participants, thirty-nine for experimental and thirty-two for control, were interviewed at the pre-campaign stage. At the post-campaign stage, two declined participation, two had left Christchurch, and a fifth was not contactable. This reduced the experimental group to thirty-eight and the control group to twenty-eight.

A possibility of control group exposure to STANN was noted, as it was possible for anyone to pick up a copy from the St Albans Community Centre or from nearby shops. In determining control group exposure to the information campaign, at the post-campaign stage, control group respondents were shown copies of STANN, and asked if they had seen or read any of the campaign articles. In one case, a respondent indicated that she had picked up STANN from a shop and recalled reading one issue. This respondent was therefore transferred to the experimental group.

Perloff (1993) observed that unlike persuasion studies conducted in laboratories, where subjects’ exposure to persuasive messages can be ensured, organisers of information campaigns conducted in real world settings, cannot guarantee that the target audience will see or hear the information campaign. Such non-exposure was evident in this study. Twenty-two individuals in the experimental group either did not read the articles or did not receive the newsletter, reducing the number of individuals that were exposed to the campaign articles to seventeen. Many indicated that delivery of STANN was sporadic.

It was also found that level of exposure to the information campaign differed within the experimental group. Of the seventeen, five (29%) were exposed to one issue, nine (53%) were exposed to two issues, while only three participants (18%) were exposed to all three issues. Some had read the articles thoroughly while some skim-read the articles. Exposure to articles that appeared in the December issue was lowest at 41%. Although initially it was assumed that December would be a good time to start the campaign, considering the higher amount of shopping for Christmas, at the post-campaign stage many participants indicated that they had missed reading the newsletter during that month because they were busy preparing for Christmas and the holidays. Exposure to articles that appeared in the February issue was highest at 82% and exposure to articles in the March issue was 65%.

Experimental researches in other fields face similar problems with treatment. In clinical trials, for example, subjects may reduce the dosage of assigned drugs treatment; in educational interventions subjects may have missed sessions or not paid full attention. In randomised experimental research this is referred to as subject ‘non-compliance’ or ‘non-adherence’ to assigned treatment which weakens the firm ground afforded by the randomised treatment assignment and jeopardises result interpretations (Gitelman 2001). In this study, however, exposure to campaign was left to occur as it would have under natural conditions. Considering the lack of nomenclature to refer to such a group in quasi-experimental research, the twenty-two individuals who were not exposed to the campaign articles were referred to as the *unexposed experimental group* (or *unexposed group* for short). Statistical analysis comparing pre-to-post changes, were conducted separately for the three groups, i.e. experimental, control and unexposed. After the post-campaign interviews, groups were reformulated as follows:

17 in the experimental group
(original 39 - 1 drop out - 22 unexposed + 1 transfer from control)

22 in the unexposed experimental group

27 in the control group
(original 32 - 4 drop outs - 1 transfer to experimental group)

6.4.2 Pre treatment comparability between experimental and control groups

As shown in Tables 6-1 to 6-4, the control and experimental groups did not significantly differ for all demographic variables and potentially confounding situational and participant variables tested.

Table 6-1 Comparison of experimental and control groups for demographic variables

Variables	Statistical test used and results
Gender	Chi-square test for independence $\chi^2(1, n=71)=0.210, p=0.646$
Partnership status	Chi-square test for independence $\chi^2(1, n=71)=0.11, p=0.917$
Employment status	Chi-square test for independence $\chi^2(2, n=71)=1.615, p=0.446$
Parental status	Chi-square test for independence $\chi^2(3, n=71)=6.158, p=0.111$
Age	Mann-Whitney U Test $U=499.500, N_1=40, N_2=31, p=0.149, \text{two-tailed}$
Education level	Mann-Whitney U Test $U=563.000, N_1=40, N_2=31, p=0.464, \text{two-tailed}$
Income level	Mann-Whitney U Test $U=489.000, N_1=40, N_2=31, p=0.326, \text{two-tailed}$

Table 6-2 Comparison of experimental and control groups for potentially confounding situational variables (participants' exposure to media)

Variables	Statistical test used and results
Television	Mann-Whitney U Test U=532.500, N ₁ =40, N ₂ =31, $p=0.153$, two-tailed
Radio	Mann-Whitney U Test U=597.500, N ₁ =40, N ₂ =31, $p=0.720$, two-tailed
Newspapers	Mann-Whitney U Test U=565.500, N ₁ =40, N ₂ =31, $p=0.492$, two-tailed
Commercial magazines	Mann-Whitney U Test U=67.500, N ₁ =20, N ₂ =10, $p=0.086$, two-tailed

Table 6-3 Comparison of experimental and control groups for potentially confounding situational variables (participants' children's exposure to media)

Variables	Statistical test used and results
Television	Mann-Whitney U Test U=85.500, N ₁ =20, N ₂ =10, $p=0.360$, two-tailed
Radio	Mann-Whitney U Test U=72.000, N ₁ =20, N ₂ =10, $p=0.188$, two-tailed
Newspapers	Mann-Whitney U Test U=86.000, N ₁ =20, N ₂ =10, $p=0.446$, two-tailed
Commercial magazines	Mann-Whitney U Test U=67.500, N ₁ =20, N ₂ =10, $p=0.086$, two-tailed

Table 6-4 Comparison of experimental and control groups for potentially confounding participant variables (environmental values and attitudes towards shopping)

Variables	Statistical test used and results
<i>Environmental values</i>	
Environment friendly / ethical shopping choices	Chi-square test for independence $\chi^2(1, n=71)=1.857, p=0.173$
Prioritisation of environmental policy when voting	Chi-square test for independence $\chi^2(1, n=71)=0.325, p=0.568$
Membership of environmental organisations	Fisher's Exact Test $p=0.187$, two-sided Fisher's exact test
Composting	Chi-square test for independence $\chi^2(1, n=71)=0.356, p=0.550$
Recycling	Fisher's Exact Test $p=0.196$, two-sided Fisher's exact test
<i>Attitudes toward shopping</i>	
Association of happiness with purchases	Chi-square test for independence $\chi^2(1, n=71)=2.284, p=0.131$
The act of shopping as a pastime	Chi-square test for independence $\chi^2(1, n=71)=0.244, p=0.621$

Enjoyment of shopping	Chi-square test for independence $\chi^2(1, n=71)=1.188, p=0.276$
<i>Desire for change in behaviour</i>	
To not be easily influenced by advertising	Mann-Whitney U Test U=507.000, N ₁ =39, N ₂ =27, p=0.409, two-tailed
To shop less/ spend less	Mann-Whitney U Test U=516.000, N ₁ =39, N ₂ =27, p=1.000, two-tailed
To shop ethically	Mann-Whitney U Test U=501.000, N ₁ =39, N ₂ =27, p=0.563, two-tailed

As shown in Table 6-5, the experimental and control groups did not significantly differ in their pre-existing views about consumerism for all measurements, except for variable 4 – the level of belief in moderate consumerism as a solution to waste and pollution. This variable was therefore not used to compare the experimental and control groups, in relation to treatment effects.

Table 6-5 Comparison of experimental and control groups for potentially confounding participant variables (pre-existing views about consumerism)

	Variables	Statistical test used and results
1	Positive or negative views expressed about consumerism in an open-ended question	Mann-Whitney U Test U=185.000, N ₁ =23, N ₂ =17, p=0.644, two-tailed
2	Positive or negative views about consumerism determined via the - views about consumerism scale	Mann-Whitney U Test U=432.500, N ₁ =36, N ₂ =25, p=0.796, two-tailed
3	Level of believe in technological solutions to waste and pollution	Mann-Whitney U Test U=427.500, N ₁ =37, N ₂ =25, p=0.589, two-tailed
4	Level of believe in moderate consumerism as a solution to waste and pollution	Mann-Whitney U Test U=316.500, N ₁ =38, N ₂ =25, p=0.018, two-tailed
5	Opinion about categorisation of New Zealand as a consumerist society	Mann-Whitney U Test U=497.500, N ₁ =37, N ₂ =27, p=0.960, two-tailed
6	Opinion that advertising was a driving force of consumerism in New Zealand	Chi-square test for independence $\chi^2(1, n=66)=0.025, p=0.873$

As results presented in Table 6-6 indicate, the control and experimental groups did not significantly in their pre-existing understanding and perceptions about sustainable consumption for all measurements, but one. Since there was a significant difference between the groups for the level of awareness of underlying principles of sustainable consumption (Variable 8), these variables were not used to compare the experimental and control groups, in relation to treatment effects.

Table 6-6 Comparison of experimental and control groups for potentially confounding participant variables (pre-existing understanding and perceptions about sustainable consumption)

	Variables	Statistical test used and results
7	Degree of understanding of the term sustainable consumption indicated in an open-ended question and determined via the – sustainable consumption: degree of understanding scale	Mann-Whitney U Test U=493.000,N1=39,N2=27, p=0.651,two-tailed
8a	Level of awareness of underlying principles of sustainable consumption determined via the – sustainable consumption: principles awareness scale (Measurement using filtered data)	Mann-Whitney U Test U=116.000,N1=25,N2=17, p=0.013,two-tailed
8b	Level of awareness of underlying principles of sustainable consumption determined via the – sustainable consumption: principles awareness scale (Measurement using unfiltered data)	Mann-Whitney U Test U=59.500,N1=20,N2=11, p=0.035,two-tailed
9a	Level of prioritisation given to sustainable consumption determined via the – sustainable consumption: prioritisation scale (Measurement using filtered data)	Mann-Whitney U Test U=282.500,N1=28,N2=21, p=0.814,two-tailed
9b	Level of prioritisation given to sustainable consumption determined via the – sustainable consumption: prioritisation scale (Measurement using unfiltered data)	Mann-Whitney U Test U=156.500,N1=23,N2=14, p=0.886,two-tailed
10	Level of importance attributed to the need for sustainable consumption policies in New Zealand	Mann-Whitney U Test U=333.500,N1=29,N2=23, p=1.000,two-tailed

As provided in Table 6-7, there were no significant pre-existing differences between the control and experimental group in their views and awareness about advertisements.

Table 6-7 Comparison of experimental and control groups for potentially confounding participant variables (pre-existing views and awareness about commercial advertisements)

	Variables	Statistical test used and results
11	Positive or negative feelings about advertisements expressed in an open-ended question	Mann-Whitney U test U=448.500,N1=39,N2=27, p=0.289,two-tailed
12	Perceived degree of advertising influence on others	Mann-Whitney U test U=489.500,N1=39,N2=27, p=0.556,two-tailed
13	Perceived degree of advertising influence on self	Mann-Whitney U test U=453.000,N1=39,N2=27, p=0.293,two-tailed
14	Awareness about the use of consumer psychology in advertising	Nil – no indication of this awareness in all cases
15	Awareness about the use of emotional appeals in advertising	p=0.144, two-sided Fisher's exact test
16	Concern about advertising effects on children's consumerism	p=0.181, two-sided Fisher's exact test

6.4.3 Impact on views about consumerism

As provided in Table 3-4, no significant pre-to-post changes in views about consumerism were observed for all three groups. All related hypotheses⁹⁷ were hence rejected, and it was concluded that the campaign did not have an effect on views about consumerism.

Table 6-8 Comparison of pre and post-campaign views about consumerism

Hypothesised Variables	Statistics Used	Experimental Group	Control Group	Unexposed Group
H ₁	Wilcoxon Signed-Rank test	Z=1.633,N-Ties=3, Exact p=0.250, two-tailed	Z=1.414,N-Ties=5, Exact p=0.313, two-tailed	Z=1.857,N-Ties=4, Exact p=0.125, two-tailed
H ₂	Wilcoxon Signed-Rank test	Z=0.584,N-Ties=11, Exact p=0.584, two-tailed	Z=1.146,N-Ties=21, Exact p=0.264, two-tailed	Z=0.428,N-Ties=15, Exact p=0.688, two-tailed
H ₃	Wilcoxon Signed-Rank Test	Z=0.087,N-Ties=7, Exact p=1.000, two-tailed	Z=1.483,N-Ties=10, Exact p=0.193, two-tailed	Z=1.687,N-Ties=14, Exact p=0.117, two-tailed
H ₄	Wilcoxon Signed-Rank Test	Z=1.100,N-Ties=8, Exact p=0.344, two-tailed	Z=1.523,N-Ties=12, Exact p=0.144, two-tailed	Z=0.483,N-Ties=9, Exact p=0.691, two-tailed
H ₅	Wilcoxon Signed-Rank Test	Z=1.000,N-Ties=1, Exact p=1.000, two-tailed	Z=1.633,N-Ties=3, Exact p=0.250, two-tailed	Z=0.000,N-Ties=6, Exact p=1.000, two-tailed
H ₆	McNemar's Test	N=17, Exact p=0.375, two-tailed	N=27, Exact p=0.125, two-tailed	N=22, Exact p=0.549, two-tailed

However, in self-reported changes for views about consumerism, although 71% (12) in the experimental group reported no changes, 23% (4) reported a minor change, and 6% (1) reported a major change. In the control group, 74% (20) indicated no change, 22% (6) indicated a minor change, and 4% (1) indicated a major change. In the unexposed group, 73% (16) indicated no change, and 27% (6) indicated a minor change; none indicated a major change.

In the experimental groups, when those reporting minor and major changes were asked what caused this change, only one individual indicated the newsletter, STANN, as a contributing factor. After experimental group participants were shown the campaign articles at the end of the interview, and recall facilitated, although none reported that the information campaign contributed *very much* to their views, 59% (10) indicated that the articles did contribute *a little* to what they expressed

⁹⁷ H₁: The experimental group would express increased negative views about consumerism after exposure to the information campaign, relative to the control group; H₂: The experimental group would have a higher score in the *views about consumerism scale*, indicating increased negative views about consumerism after exposure to the information campaign, relative to the control group; H₃: The experimental group would have a higher level of disbelief in technological solutions to waste and pollution after exposure to the information campaign, relative to the control group; H₄: The experimental group would have a higher belief in moderate consumerism as a solution to waste and pollution after exposure to the information campaign (Not testable in relation to control group, due to pre-existing differences between the groups); H₅: The experimental group would have an increased tendency to regard New Zealand as a consumerist society, after exposure to the information campaign, relative to the control group; H₆: The proportion of respondents identifying advertising as a driver of consumerism would increase in the experimental group, after exposure to the information campaign, relative to the control group.

about consumerism. Increase in the number of respondents acknowledging the campaign's contribution, after recollecting having read the campaign articles, served to show that recall facilitation in post-campaign evaluation, may result in more accurate self-reported impact.

6.4.4 Impact on understanding and perceptions about sustainable consumption

Of the four hypotheses⁹⁸ examined to test changes in understanding and perceptions about sustainable consumption, as results presented in Table 6-9 show, only H₇ was supported.

Table 6-9 Comparison of pre and post-campaign understanding and perceptions about sustainable consumption (using Wilcoxon Signed-Rank Tests)

Hypothesised Variables	Experimental Group	Control Group	Unexposed Group
H ₇	Z=2.646,N-Ties=13, Exact p=0.006, two-tailed	Z=1.913 N-Ties= 5, Exact p= 0.056, two-tailed	Z=1.761,N-Ties=11, Exact p= 0.104, two-tailed
H ₈ (unfiltered)	Z=0.723,N-Ties=10, Exact p=0.510, two-tailed	Z=2.969,N-Ties=13 , Exact p= 0.002, two-tailed	Z=2.214,N-Ties=6, Exact p= 0.031, two-tailed
H ₈ (filtered)	Z=0.935,N-Ties=8, Exact p=0.453, two-tailed	Z= 2.390,N-Ties=9, Exact p=0.020 , two-tailed	Z=1.841,N-Ties=4, Exact p= 0.125, two-tailed
H ₉ (unfiltered)	Z=0.780,N-Ties=7, Exact p=0.563, two-tailed	Z=1.721,N-Ties=15 , Exact p=0.100 , two-tailed	Z=0.040,N-Ties=12, Exact p= 1.000, two-tailed
H ₉ (filtered)	Z=0.322,N-Ties=6, Exact p=0.906, two-tailed	Z=0.626,N-Ties=10 , Exact p=0.582 , two-tailed	Z=0.318,N-Ties= 6, Exact p= 0.844, two-tailed
H ₁₀	Z=1.342,N-Ties=5, Exact p=0.375, two-tailed	Z=0.816,N-Ties=3 , Exact p=0.750 , two-tailed	Z=1.000,N-Ties=1, Exact p= 1.000, two-tailed

In testing H₇, a *Wilcoxon Signed-Rank Test* showed that the pre-to-post scores for the *sustainable consumption degree of understanding scale* significantly differed for the experimental group. Although it was found that the p-value exceeded at the third decimal point (p=0.056) for the control group, in comparison, the change in the experimental group was very high in significance (p=0.006). The increase in understanding in the experimental group was hence attributable to the information campaign. 11 of the 17 in the experimental group exhibited increase in scores for this scale. For example, in the pre-campaign interview one respondent said that sustainable consumption was about “using only what we can replace” demonstrating an understanding that contained one key point, i.e. ‘renewable resources’. In the post-campaign interview, this respondent

⁹⁸ H₇: The experimental group would exhibit a higher score in the – *sustainable consumption degree of understanding scale*, after exposure to the information campaign, relative to the control group; H₈: The experimental group would show an increase in score in the – *sustainable consumption principles awareness scale*, after exposure to information campaign (Not testable in relation to control group, due to pre-existing differences between the groups); H₉: The experimental group would show an increase in score in the – *sustainable consumption prioritisation scale* after exposure to the information campaign, relative to the control group; H₁₀: There would be an increase in the proportion of individuals within the experimental group, indicating a need for sustainable consumption policies, after exposure to the information campaign, relative to the control group.

was able to provide an explanation of sustainable consumption using four key points – ‘resource conservation’; ‘needs-based consumption’; ‘waste reduction’; and ‘alternative resources’. She said:

It means only using the resources that are available without overusing them. Enough to, just what we need and not waste and consume. Not chopping down forests and things like that if you don’t need to. Using alternatives. I think waste is a big thing isn’t it?

In another case, a respondent exhibited only a vague idea of sustainable consumption in the pre-campaign interview. She said that to her sustainable consumption was:

a point where we can get to with consumption, with consumerism. Like a happy medium with all our buying and spending and getting to that right level. Sustainable consumption, I guess, it’s the right level of consumption.

In the post-campaign interview she provided the following explanation that included five key aspects of sustainable consumption – ‘resource conservation’; ‘recycling’; ‘pollution reduction’; ‘needs-based consumption’; and ‘needs of future generations’:

It means using our resources economically, not overusing our supplies. Having a balance life I guess. And you know, recycling, not buying a lot of things that creates pollution and [that are] not biodegradable. Yeah, I guess, not spending beyond our means. I guess, not spending more than we need to. Also, being aware of the fact that there is another generation coming along and that we have got to be conscious of the fact that the earth would be the way it is now, not completely destroyed and all the good resources being taken away.

Two individuals in the experimental group exhibited an unexpected decrease in understanding. In the first case, the respondent’s pre-campaign explanation was: “It is what the country can afford to spend on food without going deeper into debt which we are at the moment. That we can sustain our usability and whether the environment can”. Since she associated the environment with consumption, this was coded as a ‘vague understanding’. However, at the post-campaign she said: “It means that, it is what society can afford really. Balance of payment and things like that. Whether we can still afford to buy like we do internationally.” This was coded as ‘no understanding’. In the second case, the respondent was able to explain sustainable consumption with three keywords at the pre-campaign interview – ‘waste reduction’; ‘renewable resources’; and, ‘reduction of consumption’. She said:

I would think of things like less packaging, as being an example of sustainable consumption. I think it is the idea of – that somehow you are renewing resources, rather than sort of using them up. So perhaps, replacing the resources that you use. Could also be reducing the amount that you use.

At the post-campaign interview, in explaining sustainable consumption, she said: “So that you can continue to consume. That things are replaced, as you consume.” When probed for an elaboration, she said: “I suppose just the, in terms of resources, natural resources being replaced”. This was rated as understanding expressed with one key point only, i.e. ‘renewable resources’.

This first respondent reported having read the articles in all three issues of STANN while the second respondent reported having read the articles in the February and March issues, hence were

definitely exposed to at least one article on sustainable consumption. Although strict compliance with the established coding system forced an interpretation of the above pre-to-post responses as decreases in understanding, as described by Fischer (1995: 56), “it is counterintuitive that an information campaign would cause a real reduction of knowledge about the object of the campaign”. Fischer reasoned that it was “possible that a campaign might create confusion or might expose people to other sides of an issue” (*ibid*: 56). In addition, it was reasoned that respondents’ state of mind, at the time of interview may also have an effect on their answers. For example, the second respondent, noted above, appeared to be less communicative at the post-campaign interview. Therefore, she may have provided a briefer report of her understanding. This points to an advantage of employing the face-to-face interview method in impact assessment – as without personal contact between researcher and respondent, there would be no way to assess respondents’ mood when answering questions, and hence no way of judging possible reasons when interpreting unexpected results such as decreases in understanding after exposure to an information campaign.

Self-reported changes in understanding about sustainable consumption were somewhat similar with the statistical findings. There were higher self-reported impacts among experimental group participants compared to the control and unexposed groups. 6% (1) of respondents in the experimental group reported a big change, 29% (5) reported a minor change, and 65% (11) reported no changes. In the control group, on the other hand, none reported major changes; only 11% (3) reported a minor change in understanding, while a majority of 89% (24) reported no change. Similarly, in the unexposed group, there were no reports of major changes; 14% (3) reported a minor change, while a majority of 86% (19) reported no change.

Three of the six individuals in the experimental group, who indicated self-reported changes to their understanding, attributed their increased understanding to the information campaign. This figure was lower than expected. It was reasoned that participants may have experienced difficulty in recalling the exact causal factor to changes in their understanding. At the end of the interview, after the experimental group participants were shown the campaign articles and recall of exposure to the campaign facilitated, 12% (2) indicated that the campaign articles did contribute *very much* to what they expressed about sustainable consumption, 56% (10) indicated that the articles contributed *a little*, while 23% (4) said that the articles did not make a difference to what they expressed.

Since there were pre-existing differences between the groups for scores obtained in the – *sustainable consumption principles awareness scale* it was not possible to fully test H_8 . However, it was observed that contrary to what was expected, the experimental group did not show a concurrent increase in awareness about the underlying principles of sustainable consumption with an increase in understanding of sustainable consumption (as was exhibited in the increased scores for the – *sustainable consumption degree of understanding scale*). A Wilcoxon Signed-Rank Test

for the experimental groups, showed six negative ranks of a total of eleven, using unfiltered data and five negative ranks of a total of nine, using filtered data. Although pre-to-post changes were not statistically significant, these negative ranks interpreted as a pre-to-post decrease in understanding of sustainable consumption within the experimental group. On the other hand, a pre-to-post drop in the number of respondents who selected the ‘don’t know’ answer option for all three groups was observed, with the experimental group exhibiting the highest percentage of drop (See Figure 6-8). These findings, however, were not interpreted as accurate indicators of increase or decrease in knowledge due to the observed limitations of Likert-type scales as a measurement tool for understanding of sustainable consumption (as discussed in Section 6.4.5).

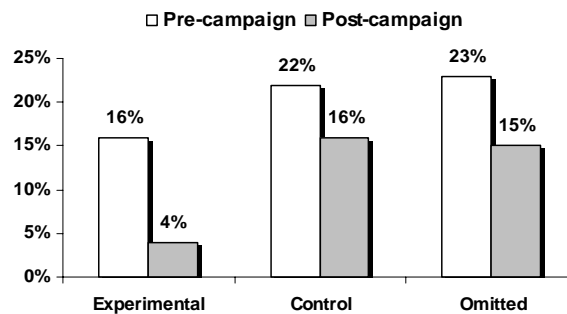


Figure 6-8 Percentage of respondents who selected the ‘don’t know’ answer option in the *sustainable consumption principles awareness scale* at the pre- and post-campaign stages

Based on additional comments that participants provided in response to the statement – “Sustainable consumption helps bring about social equality”, it was worthy of note that most participants associated this with local social equality. They did not make the association with inter-generational equality or between country intra-generational equality. This finding pointed to the necessity to highlight intra- and inter- generational equality aspects of sustainability in future awareness raising initiatives.

Although it was expected that the level of importance attributed to sustainable consumption would increase with an increase in understanding of sustainable consumption, such trends were not observed in the experimental group. Statistical tests for H_0 showed that there were no significant changes in scores for the – *sustainable consumption prioritisation scale* for all three groups (see Table 6-9). This lack of effects may be attributed to limitations of the Likert scale as a measurement tool (see section 6.4.5 below). However, it may also be associated with what others have observed that a change in knowledge may not automatically result in a change in attitude. Oppenheim (1992: 176-177), for instance, observed that changes in opinion are:

relatively easy to bring about so long as the underlying attitude is not involved. Thus, it may not be too difficult to convince a man with strong anti-Mexican views that he is wrong in his opinion that Mexicans have a high crime rate; but his underlying anti-Mexican attitude remains unaltered, and he will soon find some other belief with which to bolster his hostile attitude.

Therefore, sustainability behavioural change programmes may need to combine information campaigns with other behavioural change strategies to effectively bring about changes in attitude and behaviours. These aspects are discussed further in the conclusions of this chapter.

As illustrated in Figure 6-9, in responding to the *sustainable consumption prioritisation scale*, there was a drop in the selection of the ‘don’t know’ answer option for all three groups, with the experimental group showing the highest percentage of drop. However, this was not interpreted as enhanced prioritisation attributed to sustainable consumption, due to the problems encountered with the scale used (see section 6.4.5 below).

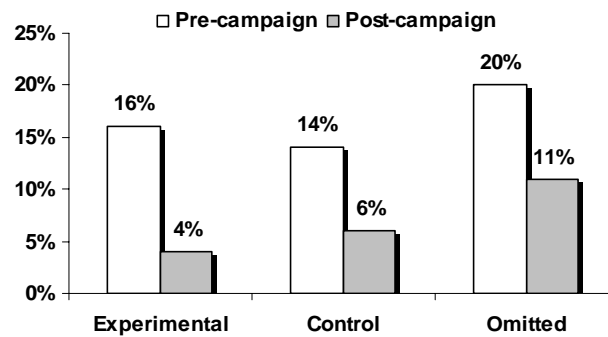


Figure 6-9 Percentage of respondents who selected the ‘don’t know’ answer option in the *sustainable consumption prioritisation scale* at the pre- and post-campaign stages

In this section of the interview, an important perspective gained from responses to the statement, – “Assurance of cheaper products for consumers should be prioritised over sustainable consumption”, was the need to make sustainably produced items more affordable to all. Many respondents were of the view that sustainably produced items were more expensive hence not accessible to all. This was regarded as an important aspect to be considered in sustainable consumption policies. Contrary to this view was that sustainable production could lead to cheaper products, as expressed by one participant in the control group: “I think you’ll get cheaper products if you get sustainable consumption because the cost of packaging reduces and all that sort of thing”. This may be related to the limitations of technological efficiency as discussed in Section 2.3. Increased efficiency may result in reduced costs, which may in turn cause an increase in consumption, which could counter the aims of sustainable consumption practices.

In testing H_{10} , there were no significant changes found for perceived necessity for prominent sustainable consumption policies for all three groups. However, *Wilcoxon Signed-Rank Test* showed that the experimental group had a higher percentage of positive ranks (4 out of 14, 29%) in comparison to the control group (1 out of 21, 5%) and the unexposed group (0 out of 14, 0%). Although not statistically significant this was interpreted to mean a slight increase in the perceived necessity for sustainable consumption policies within the experimental group.

Another finding worthy of note in this section of the interview was that, because sustainable consumption was the research topic it may have been seen as a topic of importance. In response to the question on need for sustainable consumption policies in New Zealand, one respondent said: “I would say yes, considering that your topic is on this though. I would think so; otherwise you wouldn’t be doing such a study would you?” This finding may add to Henry and Mark’s (2003) discussion on the possible effects of evaluation on attitudes and action. Future public information campaigns should note the possibility that impact evaluation may effect perceptions about the campaign topic among those surveyed.

6.4.5 Limitations of the Likert-type scale as a measurement tool

The limitations of scales as a measurement of attitude have been previously acknowledged. For example, Oppenheim (1992: 175) commented that since “most attitudes are parts of a wider compound of values, beliefs and feelings and are themselves made up of several components of sub-areas” numerical attitude measurement scales have limited reliability.

For measurement of changes in understanding of sustainable consumption, in this study, it was reasoned that only the open-ended question, used to test H₇ was a reliable measurement of change. In testing H₈ and H₉, several problems were encountered in the use of Likert-type scales for the measurement of understanding.

Firstly, despite preventative measures taken, uninformed responses and non-attitude reporting were encountered. Although a ‘don’t know’ answer option was provided in the response set, some chose to respond to the Likert-type statements despite having acknowledged that they did not know what sustainable consumption was. For instance, in response to the statement ‘Economic growth should be prioritised over sustainable consumption’, one respondent from the unexposed group said: “I am mixed between 2 [mixed view, agree more than disagree] and 3 [completely neutral], since I don’t really understand sustainable consumption. Economic growth is important so I am gonna have to go with 2”.

Secondly, it was observed that many respondents chose the ‘neutral’ answer option to indicate that they did not know. For example, when an experimental group respondent was probed to provide a reason for her neutral response to the statement ‘Sustainable consumption helps bring about social equality’, she said: “Basically because I don’t know if it does or not. I don’t know enough about it really to make a view.” Another from the unexposed group indicated that she was neutral to the statement, ‘Sustainable consumption means that things are produced more efficiently’. When probed, she explained that she did not know what ‘produced more efficiently’ meant.

Thirdly, it was observed that some respondents reasoned out their answers when responding to the Likert-type statements. For example, although unaware of the meaning of sustainable consumption, one respondent in the unexposed group agreed with the statement 'Ensuring a wide range of products in the market should be prioritised over sustainable consumption.' She reasoned: "If you have got a wide range of products then there is more choice to choose from. A wider range of products means there is going to be price differences". In other cases, respondents provided commonsensical reasoning for their answers. Although he did not know what sustainable consumption meant, a respondent in the unexposed group disagreed with the statement, 'Sustainable consumption helps reduce environmental problems like waste and pollution.' He reasoned: "Waste and pollution is always going to be there. No matter how much we try to solve it, it is always going to be an issue. There is no getting rid of it, no matter what you do." Responses such as the preceding two indicate the possibility that respondents may tend to respond to a Likert-type statement, if they understood part of the sentence. This may be regarded as a 'partially' uninformed response, and needs to be cautiously dealt with in result interpretation.

Fourthly, it was observed that respondents who believed they understood the meaning of sustainable consumption, responded to the Likert-type statements in accord to their understanding. For example, some respondents understood sustainable consumption in a literal sense, i.e. sustained consumption. One from the control group said: "[It means] being able to live within your means really. Being able to buy what you can afford really and not overspend". Likewise, another from this group said, "Probably stabilizing how much you spend. If you go shopping, budget yourself, so you don't go over your prices." These respondents then provided answers to the Likert-type statements based on their understanding that sustainable consumption was about not spending more than you have. In these two cases misunderstanding of sustainable consumption was clear. However, because these respondents believed they understood the meaning of sustainable consumption, their responses are more accurately categorised as a response error resulting from misunderstanding, distinguishing it from 'uninformed response error' as described by (Hawkins and Coney 1981) and 'non-attitude reporting' as described by (Krosnick *et al.* 2002).

Extensive selection of the neutral answer option (undecided, no opinion, don't know) on Likert-type scales among respondents has been observed to be a common problem in survey research (Ma 1998). Ma (1998: 39-40) suggested that this aspect should be taken into account to avoid distorted data analysis:

For instance, in the presence of a large number of neutral responses, the correlation between environmental attitude and environmental behavior may be either over- or underestimated. In addition, researchers may lose much valuable information, especially on environmental issues. Respondents who choose neutral responses on certain environmental issues may not be truly neutral, but may be reluctant to express their opinions.

Ma suggested that such defects may be dealt with statistically using canonical analysis, a type of multivariate statistical analysis. While this technique of data manipulation may be useful at the post-data collection phase of research, in this research, it was suggested that the neutral answer choice (undecided or no opinion) may be better dealt with during data collection. For example, when respondents in this study, were probed to explain their neutral answer choice, they often indicated that it was because they did not know enough about the topic. At that point, some respondents decided to change their answers from a 'neutral' to 'don't know.' For example, a respondent from the control group initially chose neutral to the statement 'Sustainable consumption helps bring about social equality'. When asked why, she said: "Because I don't know if it really does. Maybe 6 [the "don't know" answer option] would be better". Therefore, the follow-up question, initiated a reflection process that helped the respondent provide a more accurate answer. On the other hand, some respondents provided a neutral answer because of an actual doubt about the issue. For example, a participant from the experimental group chose neutral for the statement 'Sustainable consumption helps reduce environmental problems like waste and pollution' at the pre-campaign interview. When asked why, she said: "Because I think, I wouldn't be certain, but there could be likelihood that waste and pollution are still involved in sustainable consumption. So it may not necessarily reduce them. I am not really sure". Hence, differing from Ma (1998) this research differentiated the answer option 'neutral' from 'don't know'.

A fifth problematic situation with Likert-type statements encountered in this study was that a level of agreement or disagreement to a statement may have been a measurement of opinion or perspective rather than understanding about the topic. For instance, a respondent from the unexposed group agreed with the statement 'Sustainable consumption helps reduce environmental problems like waste and pollution' at the pre-test, but disagreed with it at the post-test. He explained:

I don't think there is such a thing. I don't believe there is such a thing as sustainable consumption. The only sustainable consumption I can imagine would be no consumption at all, other than the basics like food and shelter.

In his case, it was not that he did not understand the meaning of sustainable consumption, but rather that he was strongly opinionated about what sustainable consumption should mean. In response to the statement, 'Sustainable consumption means that things are produced more efficiently' a participant from the unexposed group said: "Well in theory I guess it does yeah. But I don't believe that. So I'd say, two [agree more than disagree]. I don't see evidence of that happening any where. It is just a theory isn't it?" Responding to the same statement, a respondent from the experimental group said: "It sounds so good just like that but I don't see it happening" and indicated a disagreement to this statement. In these two cases, respondents seemed to have provided an opinion based on the current state of production instead of the underlying principle that sustainable consumption requires sustainable production. Answers such as these which were based

on opinions, posed a problem with the analysis of the Likert-scales intended to measure understanding. A qualitative analysis of responses showed that changes were rather a result of change in perspective or opinion, pointing to a further limitation of the Likert scale as a measurement tool for understanding.

A sixth limitation, observed in this study, was that, due to the intricacies associated with the concept of sustainability, responses to Likert scale statements were not accurate measurements of understanding or attitude towards sustainable consumption. While statements in Likert scales need to be precise and brief, the concept of sustainability is not easily expressed in this manner. Therefore, a level of agreement or disagreement to brief statements about sustainable consumption gives little information about respondents' degree of understanding of sustainability and their views. For example, two respondents in the unexposed group who understood the meaning of sustainable consumption, agreed with the statement – 'Assurance of cheaper products for consumers should be prioritised over sustainable consumption'. The first reasoned:

...because unfortunately a lot of sustainable sort of products on our market are often a lot more expensive, which is sort of difficult for people on a low income to get hold of. I think if there were a majority of sustainable products that were in the mainstream marketed items, then they would probably be a lot cheaper.

Similarly, the other respondent explained that "people should still be able to afford a minimum standard of living". In the above two cases, respondents were not of the view that sustainable consumption was unimportant, but, were rather pointing out the importance of making sustainable consumption affordable to lower income groups.

The above six problematic areas need to be considered in future development of measurement scales for knowledge and attitude about sustainability. These findings give evidence to the possibility that the Likert-type evaluative method may not be a reliable tool for the measurement of knowledge or attitude, on its own. Similar to findings in this study, McQuiston *et al.* (2002) reported that in the measurement of AIDS knowledge, the quantitative Likert-type scale method did not accurately reflect knowledge when compared to a qualitative assessment method. They reported that respondents found the Likert-type format to be confusing.

In response to the debate on quantitative vs. qualitative research, findings from this study suggest that a combination of the two may be preferable for measurement of understanding and views about sustainability. To improve accuracy of Likert-type measurement tools, responses to statements could be accompanied with follow-on open-ended questions seeking reason for the expressed level of agreement or disagreement. This is likely to be more easily implemented in a face-to-face or telephone interview in comparison to self-administered questionnaires.

It was also observed that in a personal interview setting, respondents often volunteered additional comments, when they felt a need to rationalise or explain their answers. In addition, probing, which is more easily carried out in a face-to-face interview, was often necessary to find out people's exact levels of understanding. For example, in one case, a respondent expressed an inability to articulate his understanding of sustainability. When asked what sustainable consumption meant to him, he said: "I don't know. I actually don't really know, to give a definition. I don't know. I have heard of it, but I don't know whether I can give a definition". When probed further about what he thought it meant, he said: "That is, if you keep consuming, you can replenish what you are consuming". Even though initially this respondent indicated no understanding, when probed further he exhibited an understanding of a key aspect of sustainable consumption.

6.4.6 Impact on views about advertising; awareness about how commercial advertisements work; and, concerns over advertising effects on children's consumerism

As results provided in Table 6-10 show, of the six hypotheses⁹⁹ examined to test for changes in views and awareness about advertising, and concerns over advertising effects on children's consumerism, only H₁₆ was supported.

Table 6-10 Comparison of pre and post-campaign changes in views about advertising

Hypothesised Variable	Statistics Used	Experimental Group	Control Group	Unexposed Group
H ₁₁	Wilcoxon Signed-Rank Test	Z=0.577,N-Ties=9, Exact p=0.781, two-tailed	Z=1.513,N-Ties=10, Exact p=0.186, two-tailed	Z=1.933,N-Ties=7, Exact p=0.094, two-tailed
H ₁₂	Wilcoxon Signed-Rank Test	Z=0.447,N-Ties=5, Exact p=1.000, two-tailed	Z=0.378,N-Ties=7, Exact p=1.000, two-tailed	Z=1.000,N-Ties=4, Exact p=0.624, two-tailed
H ₁₃	Wilcoxon Signed-Rank Test	Z=0.816,N-Ties=3, Exact p=0.748, two-tailed	Z=0.277,N-Ties=10, Exact p=1.000, two-tailed	Z=0.258,N-Ties=12, Exact p=1.000, two-tailed
H ₁₄	McNemar's Test	N=17, Exact p=0.5, two-tailed	N=27, Exact p=1.000, two-tailed	Note: None expressed awareness at pre and post-campaign stages

⁹⁹ H₁₁: The experimental group would have increased negative feelings about advertisements after exposure to the information campaign, relative to the control group; H₁₂: The experimental group would indicate a higher degree of advertisement influence on others, after exposure to the information campaign, relative to the control group; H₁₃: The experimental group would indicate a higher degree of advertisement influence on themselves, after exposure to the information campaign, relative to the control group; H₁₄: The experimental group would have heightened awareness of the use of consumer research and psychology in advertising, after exposure to the information campaign, relative to the control group; H₁₅: The experimental group would have heightened awareness of the use of emotional appeals in advertising, after exposure to the information campaign, relative to the control group; H₁₆: The number of parents who express that advertising increases a desire for products in their children would increase in the experimental group, after exposure to the information campaign, relative to the control group.

H ₁₅	McNemar's Test	N=17, Exact p=0.375, two-tailed	N=27, Exact p=0.508, two-tailed	N=22, Exact p=0.625, two-tailed
H ₁₆	McNemar's Test	N=12, Exact p=0.031, two-tailed	N=10, Exact p=0.5, two-tailed	N=7, Exact p=0.250, two-tailed

In testing H₁₆ it was found that the campaign did have an effect on parents' expressed concerns about advertising effects on children's consumerism. A *McNemar's Test* indicated a significant pre-to-post change (p=0.031) in views expressed by the experimental group for this variable. Since no changes were observed in the control or unexposed groups, H₁₆ was supported.

In the experimental group, the number of parents who expressed that advertising increased a desire for products in their children increased from two of twelve (16.7%) at the pre-campaign stage, to eight of the twelve (66.7%) at the post-campaign stage. For instance, when asked how her children were affected by mass media contents, a mother of two, expressed in the pre-campaign interview: "I haven't really noticed any effect on them. They tend to watch only children's cartoons; they are not really interested in anything else". Referring to her five year old daughter she said: "The effects on her? No effects. Not really, not that I have noticed. It is just something to relax around, after she has done her homework and been at school, so I can get my jobs done." When asked the same question at the post-campaign interview she said: "Oh majorly! They feel that they need to have the latest shoes, the latest clothes, the latest toys." She explained that this was a result of exposure to advertisements on television. Another respondent in the experimental group, also a mother of two, indicated positive media effects at the pre-campaign interview. Referring to a children's television programme she said, "they enjoy it. They are probably reasonably passive while they are watching it, depends on how interested they are in it. They talk a lot about it. There are a lot of things like counting and colours and stuff, so they have a lot of interaction with that." However, at the post-campaign interview, she said:

Quite strongly, they watch TV and they watch the ads when they are on. They watch the kids' programmes and they watch the ads in between and they come up with saying, mum I want this for my birthday, I want that for my birthday, or we want to go to McDonalds or we want to go to The Warehouse, for example. So they do, they are very strongly influenced by it.

Similarly a father of two in the experimental group, expressed positive media effects such as enhanced knowledge about current affairs, at the pre-test. In the post-campaign interview he indicated instead the negative effects of advertising. He said: "I think they are influenced by a desire to have or acquire products that they see. They can be quite demanding in terms of wanting iPods and PlayStations and God knows what".

To further test campaign effects, a *Fisher's Exact Test* was conducted to see if there was a correlation between exposure to the related article, '*Is your child being manipulated by advertising?*' and expression of the view that advertising increases children's desire for products. Although results were not significant (p=0.491, two-sided Fisher's exact test), it is worthy of note

that of the eight individuals who indicated this view at the post-campaign stage, five had been exposed to the article.

Although not an expected outcome variable under study, some respondents expressed that the effects of advertising on their children was indirect, for example, peer pressure to keep up with trends in school. In discussing the indirect effect of advertising on her son, one respondent from the experimental group said: “He would want what they [his friends] have got; so it is trickle-down effect”. A *Fisher’s Exact Test* showed that the experimental and control groups did not significantly differ, at the pre-campaign stage, in the proportion of parents who mentioned indirect advertising effects ($p=1.000$, two-sided Fisher’s exact test). Although *McNemar’s Tests* indicated that there were no significant pre-to-post change in views expressed about indirect advertising effects in all three groups – experimental group ($N=12$, exact $p=0.125$); control group ($N=10$, exact $p=1.000$), unexposed group ($N=7$ exact $p=1.000$) – it was observed that the number of respondents who expressed this view in the experimental group increased from 1 (8.3%) at the pre-campaign stage to 5 (41.7%) at the post-campaign stage, while in the control group this number increased from 1 (10%) at the pre-campaign stage to 2 (20%) at the post-campaign stage, and in the unexposed group this number increased from 0 at the pre-campaign stage to 1 (14.3%) at the post-campaign stage. Therefore, the experimental group showed the highest increase in the number of parents who indicated indirect advertising effects.

Respondents also expressed some positive media effects such as contribution to knowledge; and neutral effects such as effects on language that they were not too concerned about. *Fisher’s Exact Test* confirmed that the experimental and control groups did not significantly differ, in the proportion of parents who expressed such positive and neutral media effects ($p=0.709$, two-sided Fisher’s exact test) at the pre-campaign stage. A *McNemar’s Test* found a significant pre-to-post drop ($N=12$, exact $p=0.031$, two-tailed) in the number of respondents who indicated positive and / or neutral media effects from 8 at the pre-test to 0 at the post-test in the experimental group. Since no significant changes were observed in the control ($N=10$, exact $p=0.375$, two-tailed) or unexposed groups ($N=7$, exact $p=0.625$, two-tailed) for the expression of this view, the change in the experimental group was attributed to the information campaign.

It was worthy of note that in exploring H_{12} and H_{13} for indicated advertising influence on self and others, signs of what has been termed the “third-person effect hypothesis” in mass communication (Davison 1983: 3) was observed. “In its broadest formulation, this hypothesis predicts that people will tend to overestimate the influence that mass communications have on the attitudes and behavior of others” (*ibid*: 3). In the case of advertising effect, the third-person effect “demonstrates that individuals attribute much greater power to advertising when asked about some other (third) person than himself or herself. In other words, they believe advertising to affect others much more

than themselves” (O’Guinn 2001: 187). In this study, Wilcoxon Signed-Rank Tests showed that respondents in all three groups indicated a significantly higher degree of advertising influence on others when compared to the degree of influence they indicated for themselves, both at the pre- and post-tests ($p < 0.05$). However, as illustrated in Figure 6-10, the percentage of individuals who indicated that they were ‘never’ affected by advertising was relatively small within the population. A majority believed that they were either ‘rarely’ or ‘sometimes’ influenced by advertising.

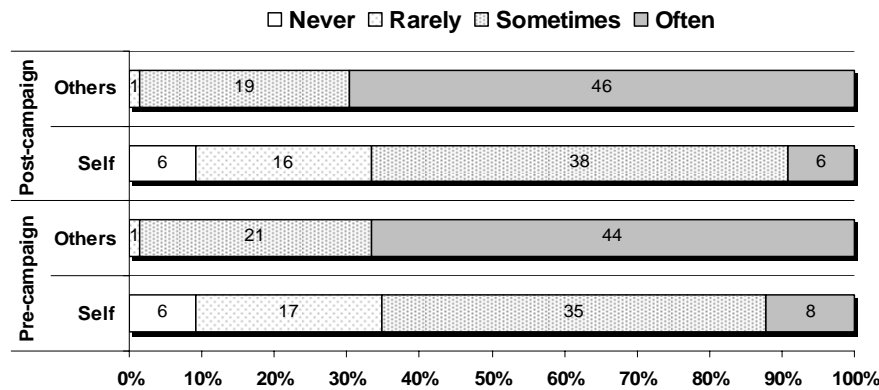


Figure 6-10 Degree of advertising influence indicated for others and self at the pre- and post-campaign stages (Numbers represent the entire population)

To some degree, self-reported changes in views about advertising were comparable with statistical findings. Among control group participants, 89% (24) reported no change, 7% (2) reported a minor change and 4% (1) reported a big change. In the unexposed group, 77% (17) indicated no change, and 23% (5) indicated a minor change; none indicated a major change. In the experimental group, 88% (15) indicated no change, 6% (1) indicated a minor change and 6% (1) indicated a major change. Neither of the individuals who reported a change in view indicated the information campaign in STANN was a causal factor. However, at the end of the interview, after the campaign articles were shown to experimental group participants, and recall facilitated, 23% (4) indicated that the campaign articles had a minor impact on what they expressed about advertising, while 71% (12) indicated no impact. There was a missing value of 6% (1) in this analysis.

6.4.7 Impact on behavioural intentions

In response to the open-ended question that asked respondents if there was anything about their shopping behaviour they wished they could change, participants provided the following responses: (1) to not be easily influenced by advertising, (2) to shop less/ spend less, (3) to shop ethically, (4) to be more organised when shopping, (5) to be less impulsive, (6) to shop more, and (7) to self-treat more often. The first three variables were of interest to the present research. However, as shown in Table 6-11, *McNemar’s Tests* showed that there were no significant pre-to-post changes for all three variables in all three groups. It was thus concluded that the campaign did not have an effect on behavioural intentions related to shopping.

Table 6-11 Comparison of pre and post-campaign changes to behavioural intentions related to shopping (using McNemar's Tests)

Variable	Experimental Group	Control Group	Unexposed Group
Wish to not be easily influenced by advertising	N=16, Exact p=0.250, two-tailed	N=26, Exact p=0.250, two-tailed	N=22, Exact p=1.000, two-tailed
Wish to shop less/ spend less	N=16, Exact p=1.000, two-tailed	N=26, Exact p=0.219, two-tailed	N=22, Exact p=1.000, two-tailed
Wish to shop ethically	N=16, Exact p=0.500, two-tailed	N=26, Exact p=0.625, two-tailed	N=22, Exact p=0.500, two-tailed

6.4.8 Interview effects

In this study, three identified interview effects that may have resulted from the pre-campaign interview were: (1) a triggered interest to acquire more information; (2) an increased alertness to the topics; and (3) discussion of the topics with others. At the end of the post-campaign interview, respondents were asked if the earlier interview triggered any of these effects. In the experimental group, 76% (13) reported that the interview made them more alert to the topic, 29% (5) indicated that they had discussed the topic with others, and 18% (3) had deliberately sought further information. In the control group, 44% (12) said they were alert about the topic and 41% (11) said they had discussed it with others. None sought further information. In the unexposed group, 45% (10) were alerted about the topic, 24% (5) reported having discussed it with others, and 5% (1) sought further information.

Adding to the reliability of the experimental results, *Chi-square tests for independence* indicated that the interview effects did not significantly differ between the control and experimental groups for the three effects: alertness to the topic ($\chi^2(1, n=44)=4.361$, $p=0.06$); discussion with others ($\chi^2(1, n=44)=0.579$, $p=0.531$); and seeking of further information ($p=0.051$, two-sided Fisher's Exact Test). Similarly, no significant differences were observed between the experimental and unexposed groups: alertness to the topic ($\chi^2(1, n=39)=3.813$, $p=0.099$); discussion with others ($p=0.727$, two-sided Fisher's Exact Test) and seeking of information ($p=0.307$, two-sided Fisher's Exact Test).

6.5 Conclusion

The information campaign under study demonstrated a minor impact on the experimental group. Of sixteen variables tested, significant effects were observed for two predetermined dependent variables in the experimental group. Evidencing impact on understanding of sustainable consumption, the experimental group showed a significant pre-to-post increase for this dependent variable ($p=0.006$). In addition, although not statistically significant, there was a slight increase in

the perceived necessity for sustainable consumption policies within this group. The experimental group also exhibited a significant pre-to-post increase in the proportion of parents who expressed concern over advertising effects on children's consumerism ($p=0.031$). Furthermore, illustrating an unintended impact, there was a significant pre-to-post drop ($p=0.031$) in the number of parents who indicated positive and / or neutral media effects on their children within this group. Although statistically not significant, the experimental group showed the highest increase in the number of parents who indicated indirect advertising effects on their children in the form of peer-pressure. As significant changes were not observed in the control and experimental groups for the above variables, changes in the experimental group were attributed to the information campaign. In addition to observed results, self-reported impacts in the experimental group, illustrated minor impacts for views about advertising and consumerism in a general sense.

However, considering the limits of the campaign, its modest scale, its conduct in real-world settings, and some limitations associated with the measurement methods employed, the resultant impact may be regarded as only indicative of the potentials for communicating sustainability through information campaigns designed according to theories of effective communication. Nevertheless, as the observed changes in understanding and views were also backed up by self-reported impacts, findings do provide some support for the potentials of the 'message framing approach' proposed in this thesis.

Based on its observations, this thesis suggests that public understanding of the meaning of sustainability terminologies should not be presumed. Considering how the campaign resulted in a deeper understanding of sustainable consumption, future information campaigns could focus on how messages about sustainability could be effectively framed. This study also strengthens the assertion that the links between advertising and consumerism needs to be raised as an issue of concern in the public arena with the purpose of clarifying its connections with the state of unsustainability, as a means to encourage sustainable consumption behaviour.

The information campaign designed for this study had several limitations that may inform the development of future communication campaigns on sustainability. First, the campaign had engaged a single medium of implementation. Its scope was therefore modest in comparison to other media campaigns that have employed a multimedia approach (see for example, Gillilan *et al.* 1996; Merom *et al.* 2003; Najavits *et al.* 2003; Staats, Wit and Midden 1996; and Yanovitzky *et al.* 2005). To enhance effectiveness, Melkote (2003) suggested the combination of media channels such as print and broadcast media. Adding on to Melkote's suggestion, it is noted that multimedia campaigns offer the advantage of increased probability of exposure. Therefore, future campaigns may benefit from the multi-media approach.

Second, campaign articles were run only once; therefore, the campaign lacked the advantage of message repetition. “One advantage of repetition is that it increases the statistical probability that people will be reached...” (Lerbinger 1972: 62). Solomon (1999) maintained that multiple exposures to information are usually required before learning occurs. In implementing their ‘precycling’ advertising campaign, Gillilan *et al.* (1996) aimed for multiple exposures to the campaign in more than one context in order to increase message retention. Although repetition is likely to offer advantage in terms of increasing chances of exposure, and facilitation of memory, too much repetition, on the other hand, may be counterproductive. As experienced within the fields of marketing and advertising, “too much repetition creates habituation, whereby the consumer no longer pays attention to the stimulus because of fatigue or boredom” which may result in a negative reaction to the advertisement (Solomon 1999: 246). Future sustainability communication campaigns would hence need to consider the implications of the extent of message repetition as this appears to be a crucial factor that is likely to determine campaign effectiveness.

Thirdly, the information campaign designed and tested in this study may be referred to, as what Lerbinger (1972) has termed, a ‘message-centred’ approach to communication. This method is generally limited in that it does not thoroughly consider or involve the target audience in its design. The approach employed to determine the topic of the campaign and its objectives in this study may be criticised as being a top-down communication approach as described by Oepen (2000a). As opposed to the participatory approach, the top-down approach often disregards “people’s perceptions and felt needs” (*ibid*: 34). In addition, Day (2000: 80) advised that in designing a “media campaign to advance an environmental cause” one should resist the temptation of using experts in defining the main campaign message. Day further asserted that

Premature efforts to identify the message may lead to missing the needs of the audience. Experts on the issue often know little about the audience. It is crucial to know the audience – to know what they already know about the issue, what they associate it with, how they feel about it – in order to design an effective message (*ibid*: 80).

Although the design process of the campaign articles in this study involved consultations with members of the community through personal interviews and group discussions, community involvement was minimal and limited to the improvement of draft campaign articles. Although suggestions provided by community members were taken into account in refining the campaign articles, the overall process of the campaign design may still be criticised as a top-down approach, as the conception that sustainable consumption was important for New Zealand society was decided by the researcher, supported with a preliminary review of literature, and confirmed only with officials in related fields. It was hence, not an issue identified as a need by the community. Melkote (2003) maintained that public service announcements on mass media networks and information campaigns often have limited effects, because they employ the traditional top-down communication approach that has been proven ineffective. Nevertheless, the use of a reputable community news medium, as a channel of communication in this study, may have offered an

advantage in relation to message effectiveness. Because of STANN's reputation as a community-oriented publication, the information campaign may not have been perceived as a top-down communication.

Fourthly, in connection with the point made above, information campaigns implemented in isolation, as was the campaign under study, are known to be less effective compared to information campaigns carried out in combination with other community-based strategies. For instance, McKenzie-Mohr and Smith (1999) observed that most sustainable behaviour change programmes have relied on mass information campaigns, either through education and/or advertising. While such programmes may effectively bring about changes in attitude, they noted that many studies have shown that actual behavioural change rarely occurs as a result of information dissemination. As an alternative, they suggested 'community-based social marketing' which integrates psychology with social marketing theories – the latter emphasises that an understanding of perceived barriers to behaviour is crucial to programme effectiveness. There are likely to be a range of factors that could encourage or discourage environmental behaviour, and understanding them would be crucial in planning effective mass communication messages. For example, barriers to change in car use behaviour may include the perceived convenience of cars, and the associated feelings of freedom and independence (Tertoolen *et al.* 1998). Therefore, in addition to the promotion of the desired behaviour, behavioural change programmes need to overcome the identified barriers to behaviour (McKenzie-Mohr and Smith 1999). Behavioural change can be effectively achieved when benefits of behavioural change are emphasised in concurrence with the removal of perceived barriers to the behavioural change (*ibid.*).

Kaplan (2000) observed that despite increasing realisation of the significance of public participation in other areas such as environmental design, environmental justice, and community development, in comparison, there has been little acknowledgement of its potential in the area of environmental behaviour. Kaplan hence identified this to be an area that needs further exploration. Drawing on psychological and cognitive themes, Kaplan suggested the *Reasonable Person Model* which is a people-oriented approach that takes into account human inclinations and motivations and is based on participatory problem-solving. 'Participatory' suggests that a large number of people can be involved, and 'problem solving' suggests that people will engage in working out solutions for themselves, instead of being subjected to what has been planned and decided for them by someone else. Kaplan describes the method he proposes as one that enhances peoples' understanding of an issue, while providing them with an opportunity to explore possible solutions.

In her proposal of communication strategies for sustainability, Parker (2003b) recommended a 'Five-Step Sustainability Strategy' that emphasised community involvement. The first step Parker suggested was people's participation in an inclusive communicative dialogue in establishing a

vision for a future that they want. She stressed that people need to decide the type of lifestyles and environment they want for themselves and for their children and what needs to be done to accomplish and sustain the future that they envision. The second step, referred to metaphorically as 'the journey' involves all the communication processes that are necessary to move the vision forward. Step three, concerns the commitments that are required in bringing about the realisation of the vision, since commitments imply that action will be taken. The fourth step, concerns accountability towards the commitment. Parker suggested that objectives need to be evaluated to ensure that they are leading to the envisioned sustainability goals and to determine the need for adjustments. Actions and accomplishments need to be acknowledged, communicated, recorded and celebrated. Step five refers to the continuance of the work towards sustainability since environmental sustainability or sustainable development is not an 'end goal', but rather a continuously evolving process that alters with change in people, technology and the social, political and culture realms (*ibid.*).

In light of Oepen's (2000a), Melkote's (2003), and Parker's (2003b) recommendations, the effectiveness of future sustainability information campaigns may be enhanced through community participation and involvement in their design and implementation processes. Campaign organisers could combine media information campaigns with the community-based strategies that Kaplan (2000), McKenzie-Mohr and Smith (1999), McKenzie-Mohr (2000), and Parker (2003b) have suggested to further enhance campaign effectiveness.

A fifth limitation of this study was that it was not based on 'formative research' which Day (2000) described as necessary in the development of environmental communication campaigns. Formative research, according to Day,

helps define which behaviors the campaign will attempt to change to achieve its broad goals. To select the most effective behaviors it is necessary to explore what people already know, believe, and care about...You must understand the difference between those who already perform the desired behavior ("doers") and those who do not ("non-doers"). Finally, formative research for a communications campaign should explore the media "diet" of our audience. Are they literate? Do they listen to radio? If so, which station(s) and at what time(s)? Do they read any publications regularly? Do they have access to TV, Internet, or other media and do they use it regularly? This information, along with your budget, will help define the strategy and choice of media (*ibid*: 81).

A sixth limitation of the campaign in this study may be related to the difficulty encountered in portraying sustainable consumption behaviour as a social norm. Observations in social psychology have emphasised the importance of social norms in influencing behaviour and behavioural intentions (Ajzen and Fishbein 1980). "Social norms imply that people should manifest a prescribed behaviour or not manifest a proscribed behaviour" (Biel and Thøgersen 2007: 93). Tertoolen *et al.* (1998) have observed that environmental information can successfully induce behavioural change only if the advocated behaviour is supported by valid social norms; is readily feasible; and, does not disadvantage the individual. Social norms are also identified to be especially

important for the promotion of sustainable consumption behaviour, as Brown and Cameron (2000: 37) have noted:

Social norms may play a critical role in motivating consumption reduction behaviors. Efforts to persuade individuals to reduce their consumption levels may have the greatest success if they foster effective social norms; that is, if they provide communications that family members, friends, respected members of the society, and members of social reference groups endorse the promoted behaviors...References to social norms, role models, and case anecdotes within the education and guidance materials may significantly promote their efficacy.

Establishment of social norms may also be important in addressing the social dilemma situation described by Tertoolen *et al.* (1998: 179):

Receiving information about the scale of the environmental problems and resulting threats can lead people to claim that others are more guilty than they are themselves (self-enhancing perceptions). Therefore they need not alter their own behavior in a more environmentally friendly direction. Even if the message is formulated so that receivers supposedly cannot avoid its relation to their own individual behavior, it still will not automatically change their behavior.

Therefore, in encouraging behavioural change, people need to be convinced that others are behaving in the same way; in other words the prescribed behaviour would first need to be seen as a social norm. However, as McKenzie-Mohr and Smith (1999) observe, the potentials of community norms that support sustainable behaviour have not been well investigated, and are largely underutilised in encouraging sustainable behaviour. They regarded this lack as unfortunate, since norms guide human behaviour – people who observe others engaging in sustainable behaviour are likely to do the same. They hence asserted: “If we are to make the transition to a sustainable future, it is critical that we are able to develop a new set of societal norms that support sustainable lifestyles” (*ibid.*: 72-73). In order for it to take effect, people first need to internalise these behavioural norms; in other words, people need to perceive the behavioural norm as the way they too ought to behave (*ibid.*). In emphasising the importance of making norms clearly visible in behavioural change programmes, McKenzie-Mohr and Smith commented:

The very act of taking recyclables to the [kerbside], for example, communicates a community norm about the importance of recycling. Most sustainable activities, however, do not have the community visibility that recycling has, and norms that support the activity, therefore, have to be promoted more actively (*ibid.*: 156).

Cialdini (2003: 105), however, cautions of “circumstances under which normative information can backfire to produce the opposite of what a communicator intends. There is an understandable, but misguided, tendency to try to mobilize action against a problem by depicting it as regrettably frequent.” To optimize the power of normative appeals, Cialdini noted the importance of recognising the difference between “descriptive norms” that convey messages about “what people typically do” and “injunctive norms” that conveys, “what people typically approve or disapprove” (*ibid.*: 105). For instance, within a statement that highlights the descriptive norm that many people are doing the undesirable thing of littering, “lurks the powerful and undercutting normative message” that “Many people are doing this” (*ibid.*: 105). Cialdini found that such messages tend to encourage an increase in the undesired behaviour and hence advised that “communicators should

avoid the tendency to send the normatively muddled message that a targeted activity is socially disapproved but widespread” (*ibid*: 108). On the other hand, Cialdini indicated that:

Although highlighting descriptive norms is detrimental when environmentally harmful behavior is prevalent, this approach should be effective when the prevalent behavior is environmentally beneficial. For example, if the majority of citizens conserve energy at home, campaign developers would be well advised to include such descriptive normative information in their presentations intended to increase residential energy conservation. Of course, if the majority of citizens also approve of such efforts, the campaign developers would be wise to incorporate this injunctive normative information as well (*ibid*: 107).

In contrast, Gillilan *et al.* (1996: 17) noted that although making known the widespread of an activity such as recycling in an advertising campaign could encourage recycling behaviour since it “conveys ideas about social appropriateness”, there is the danger in that it can cause a “diffusion of responsibility” – a feeling that one does not have to contribute since many others are already doing something to solve the problem. Such effects would need “to be anticipated and counteracted”, for instances with prompts such as “Do your part” or “Everyone needs to recycle” (*ibid*: 17).

Such variations in possible effects that can result from the depiction of social norms in campaign messages would undoubtedly make message construction about sustainable actions an arduous task. Still, the development of future campaigns may include rigorous pre-testing processes that can determine possible effects of messages before they are implemented.

Biel and Thøgersen (2007: 93) have suggested the need to activate social norms. They noted that “once a norm has been activated, people tend to keep following the norm that has been primed.” To create new norms for sustainable behaviour, McKenzie-Mohr and Smith (1999) have suggested that campaigners need to find methods to publicise people’s participation in sustainable actions, and provide feedback on the results of actions taken, back to the community. The use of personal contact to reinforce norms is also recommended since research indicates that norms are more likely to be internalised in this way (*ibid.*). Similarly, Biel and Thøgersen (2007: 101) highlighted communication as an important factor in norm activation. For environmental problems such as climate change that involve “large-scale resources where cause and effect are separated both in space and time” and where the condition of the resources are not readily visible, “information from experts and mass media” are likely to play a vital role in providing feedback that is necessary for norm supporting cooperation. The effectiveness of future communication campaigns on sustainability may hence be increased by establishing and communicating norms that support sustainability action and behaviour through the media and other forms of communication.

A possible seventh limitation of the information campaign under study was that it had incorporated a mix of suggestions for effective communication. This in itself may not necessarily be a disadvantage, considering that in an earlier evaluation of responses to different environmental message frames, Davis (1995) observed that different message frames demonstrate their influence

synergistically rather than independently. However, the disadvantage of using a mix of suggestions for message effectiveness in the framing of campaign messages was that it was not possible to separately analyse the unique advantage of each strategy employed. Future research in message framing could incorporate mechanisms to first test the effectiveness of each communication strategy considered. For instance, through a comparative assessment of messages framed based on different communication strategies, it would be possible to identify ones that are most crucial for the purpose of communicating sustainability.

In addition to the above, the conception that consumerism was a resultant effect of advertising in this research may be regarded as limited in that it was treated as a singular lineal relationship. Wolff and Biernatzki (1994) observed that although research on advertising effects is often conducted in an isolated manner, advertising is not experienced in isolation but rather as an element within a more complex media environment that includes other components such as news and entertainment programmes. Advertising effects are hence a component of overall mass media effects (*ibid.*). In addition, Schudson (1986: 241) suggested that it is necessary to also understand “the economic, political, social and cultural forces that give rise to” advertising, and “contribute to the social phenomena often attributed to” advertising. Future research in this area would need to take into account other forms of media content and other underlying forces that may contribute to consumerism and unsustainable consumption patterns. Such causal factors would also need to be discussed in information campaigns that aim to make the connection between consumerism and sustainability.

Future design of S&E communication campaigns should take every possible measure to enhance effectiveness. Improvements to campaign effectiveness are valuable considering the large costs involved in designing and implementing large-scale campaigns (Staats, Wit and Midden 1996). It is hence suggested that in formulating effective communication strategies for communicating sustainability, strategists need to broaden their search for insights. By using the best combination of strategies, garnered from cognitive psychology, persuasion methods, motivational methods, communication psychology, behavioural psychology, economic psychology, ecopsychology, environmental psychology, and even advertising techniques, more effective communication strategies may be developed. For example, recent findings from the cognitive sciences, that indicate how people automatically respond with similar emotions when exposed to the emotions of others, has a relevant social function in that it can be used to motivate pro-social behaviour (de Vignemont and Singer 2006). De Vignemont and Singer (2006) suggested that pro-social behaviour is more likely to be induced when empathy is transformed to sympathy. The authors hence proposed “that the ability to share other people’s emotional experiences and to react to them in fine-tuned manner might facilitate social communication and create social coherence” (*ibid.*: 440). This finding is especially of relevance for public communication of sustainability, as people would first need to

sympathise with future generations, before they can be expected to change behaviour for the sake of inter-generational equality. They would need to sympathise with people from other countries, before they can be expected to change their behaviour for the sake of intra-generational equality.

In his book, *Designs for Persuasive Communication*, Lerbinger (1972) has provided various suggestions for persuasive communication that could be applied to the communication of sustainability. According to Lerbinger, persuasive communication has “a feature that other forms of power lack. It has the psychological property of freedom: ‘persuadees’ feel they are acting of their own accord within the goals and guidelines set for them” (*ibid*: 5). Techniques of persuasion that has the capacity “to make a message more convincing, more persuasive, and more likely to affect behaviour” that Lerbinger noted were:

...the use of motivation research to determine the wellsprings of human behaviour; the use of symbols that have pleasant, rewarding associations; the reference to ostensible communication sources that have high credibility and thus tend to be believed; the careful selection of opinion leaders as channels of communication to the public; and references to cultural value symbols such as [national flags and heritage]...which arouse emotional support (*ibid*: 7).

Although motivation research is typically conducted within the field of marketing¹⁰⁰, its principles may be applied to S&E communication. The study of motivation concerns the analysis of the various factors that stimulate and steer human action (Lerbinger 1972). Osbaldiston and Sheldon (2003) noted that “efforts to move away from inherently wasteful and damaging behaviors and to move towards conservation-oriented or environmentally responsible behaviours” would require “motivation of a very special kind.” They found that self-determined motivation resulted in environmental behaviour changes that can be sustained for longer periods. Zavestoski (2002) proposed that individual voluntary reduction of consumption may be motivated by an awareness of the causal social-psychological stress related to living in a consumer society. Zavestoski noted that voluntary simplicity has partly resulted from the association people have made between their experiences of unhappiness and discontent with consumption oriented media messages (*ibid*.). For instance, “stress from the relentless pursuit of wealth for the purpose of consuming material goods in order to create a particular self-image leaves people dissatisfied. This reali[s]ation is motivating some individuals to seek ways of increasing feelings of fulfilment in their lives through” a less consumptive lifestyle (*ibid*: 151-152). Seip *et al.* (2006) noted that different environmental issues may require different motivations. Their findings suggested “that efforts to preserve species diversity may require other types of public motivation than efforts to reduce pollution or to use non-renewable resources” (*ibid*: 288). These and further motivation research in the context of environmental behaviour may inform the communication of sustainability to motivate related behaviours and actions.

¹⁰⁰ Within the field of marketing, motivation research is conducted to gain insights into the underlying causes of consumer behaviour and the motivation behind people’s purchases to help in the marketing of products (Belch and Belch 1999).

Environmental psychology and ecopsychology are fields that offer valuable insights into the human-environment connection that can inform the communication of sustainability. For instance, research in environmental psychology suggest that people's "attitudes about environmental issues are rooted in the degree to which people believe that they are part of the natural environment" (Schultz *et al.* 2004: 31). Kals *et al.* (1999) have observed that an emotional affinity towards nature can serve as a powerful motivator for nature-protective behaviour. Kaplan (1995) noted the growing evidence of the psychological benefits of nature. "Natural environments" are "particularly rich in the characteristics necessary for restorative experiences" (*ibid.*: 169). Further evidencing the psychological value of nature, Tennessen and Cimprich (1996) found that "attention-restoring" following fatigue could be achieved simply by looking at nature. Williams and Harvey (2001) reported peoples' transcendent experiences in forest environments, which were indicative of the spiritual values of nature. Their study found "evidence of close relationships between transcendence and both aesthetic and restorative functions of nature" (*ibid.*: 256). For instance, in describing their forest experiences many in their study reported revitalising, refreshing and peaceful experiences. Such transcendent or spiritual experiences are believed to be psychologically beneficial and may have an effect on environmental attitudes (*ibid.*). Kolandai (1999: 37) suggested that because major world religions such as Islam, Christianity, Hinduism and Buddhism, appear to have something to offer, "in terms of a spiritual appeal to the pro-environmental behaviour of reducing consumption", an attempt to make this appeal through the media and other communication channels is likely to be beneficial in bringing about desired behavioural changes. Spiritual and psychological values of nature have been rarely included in the communication of sustainability and are therefore identified as a potential area that can serve as a motivator for nature conservation and environment-friendly behaviours that can lead to sustainability.

In tackling difficult problems such as excessive private car use that is often laden with psychological resistance to behavioural changes (Tertoolen *et al.* 1998) campaigners may need to consider unconventional approaches to communication such as the *de-marketing*¹⁰¹ strategy recommended by Wright and Egan (2000) for the reduction of private car use and ownership. Wright and Egan propose that "through targeted propaganda, the automobile could be *de-marketed* as a status symbol and a convenient accessory of modern life" (*ibid.*: 287). Instead of the conventional approach of appealing to people's sense of public duty, the *de-marketing* strategy focuses on people's self-image (*ibid.*). Wright and Egan suggested that in order to change behaviour such as private car use, it is essential to first understand why people are so fond of the car. Reasons may be differentiated between those that are tangible, such as its perceived convenience and cost-effectiveness, and others that are less tangible, such as ways in which the car

¹⁰¹ The term *de-marketing* was introduced in the early 1970s by Kotler and Levy (1971) as a marketing approach to reduce consumer demands during periods of product scarcity.

fulfils embedded psychological needs such as warmth, shelter and security (*ibid.*). In addition, they noted that the car also provides social functions and is a way of self-expression. A de-marketing campaign hence aims “to engage with the car user’s self-image, at the same emotional level as the advertisements used by motor manufacturers to brand their products” (*ibid.*: 291). Themes aimed at attitude about cars that the authors warn may be offensive to some, included: “Only the feeble need cars”, and, “Buying a four wheel drive or a sports car is an admission of inadequacy (athletic, sexual, intellectual, or what-have-you)” (*ibid.*: 292). In generating themes to dissuade car use, they suggested that “it is necessary to project car travel as irresponsible or unfashionable in some sense, and furthermore, car users must be left in no doubt that the implied criticism applies to them as individuals, not just collectively” (*ibid.*: 292). Possible themes they suggested included: “Real men cycle”, “Walk and live longer”, and “Car users are motoring potatoes (the equivalent of couch potatoes)” (*ibid.*: 292).

The de-marketing strategy, as described above, indirectly points out the connections between advertising messages and ‘artificial’ needs; hence, may be employed as a particularly suitable strategy for the promotion of sustainable consumption. In New Zealand, the de-marketing strategy was successfully employed by an electricity company in Dunedin in reducing household power consumption, in the face of power shortage in 1992 (Lawson *et al.* 1996). More recently, Beeton and Benfield (2002) have proposed de-marketing as an environmental management tool for sustainable tourism management. Foxall *et al.* (2006) proposed specific de-marketing strategies for modifying environmentally harmful behaviours such as excessive private transportation use, domestic energy and water consumption, and waste generation. Wright and Egan (2000: 290) suggested that de-marketing may be effective if implemented in parallel with accepted conventional measures, such as “vehicle taxation, land use planning, teleworking, traffic management, road pricing, and other fiscal measures” in the case of car travel reduction.

Parker (2003a) suggested that while mass media campaigns are suitable for wider public audiences, interpersonal communication campaigns, focused on specific targeted audiences within the local community are more effective in involving citizens in decision-making and solving problems that are affecting their lives. Similarly, Melkote (2003) suggested the combination of interpersonal communication with the mass media approach to enhance campaign effectiveness. However, the interpersonal approach in sustainability communication may not always be effective. For example, a field experiment by Tertoolen *et al.* (1998) conducted in the Netherlands that attempted to influence car use behaviour using a personalised communication approach proved unsuccessful. Although the environmental information resulted in increased levels of awareness among the participants about the problem in general, it did not increase their awareness about their own contribution to the problem even when this was pointed out in one-on-one communications (*ibid.*). Stamm *et al.* (2000: 234) found in their study that “understanding of the connection between fossil

fuel consumption and climate change was significantly related to use of major media...and to communication through interpersonal channels (family/friends)". However, they observed that in some cases interpersonal communication led to an inaccurate understanding of the issue. Although the potential of interpersonal communication is not contested in this thesis, its potential for widespread application is limited, in comparison to the mediated communication approach.

The above strategy suggestions for the design of information and communication campaigns for the purpose of communicating sustainability would be dependent on other factors such as campaign topic, its target audience, and medium of communication. Due to the limited scope of this research, it was not possible to provide a standard set of strategies that would fit all situations. Strategies provided earlier in Section 6.3.2, however, are generally suited for communication through the print media. Future research could further contribute to the literature on effective communication strategies for sustainability by specifically analysing the suitability of communication strategies across media types and across topics.

The evaluation process in this study identified difficulties in establishing accurate measurement of campaign impact and illustrated challenges in the measurement of understanding and views. Understanding and views about sustainable consumption, in particular, were not clear-cut dependent variables. The measurement of these variables using the Likert-scale method posed several problems which included difficulties in preventing uninformed responses; responses based on opinions rather than understanding; and, its inability to capture depth of understanding. Further research is needed for the development of more reliable measurement tools for understanding and views about sustainability.

Although scales that address various aspects of sustainability have been developed, there is not one that measures overall understanding and attitudes towards the concept of sustainability in a general sense. Choi and Sirakaya (2005) developed a 51-item *Sustainable Tourism Attitude Scale* in which nine items addressed aspects of environmental sustainability. Morgil *et al.* (2006) developed a 39-item *Renewable Energy Awareness Scale* that included two statements that addressed sustainability. While the New Environmental Paradigm Scale (NEP) developed by R. E. Dunlap and K. D. van Liere in 1978 has been widely tested and reported in literature, at present, the development of a scale exclusively for the measurement of public understanding of sustainability has neither been suggested nor addressed in literature. Nevertheless, Lalonde and Jackson (2002) recommended modifications of the NEP to include the concept of sustainable development to better reflect contemporary trends of advanced public understanding of complex environmental issues. They suggested that the NEP components "may need to be updated to reflect a shift in emphasis from the prominent 1970s' issues of air and water pollution to current planetary concerns, such as

global climate change, deforestation, reductions in biodiversity, and sustainable development” (*ibid*: 28).

In spite of the limitations identified in this study, for future evaluations of sustainability awareness programmes, the development of a measurement scale may be essential considering that questionnaires consisting scales are more easily administered and analysed statistically, in comparison to qualitative questions. A standardised scale also facilitates inter-country comparisons and comparisons over time. Such a measurement scale will also be of use in measurements of progress towards sustainability. While measures of progress towards sustainability have often included indicators such as policy changes and initiated projects, it has rarely taken into account measurements of public understanding of sustainability as an indicator. For example, although a variety of economic, social and environmental indicators were noted in the report, *Monitoring Progress Towards a Sustainable New Zealand* (Statistics New Zealand 2002), the report did not list public understanding of sustainability as an indicator variable.

Despite several shortcomings, the controlled quasi-experimental design employed in this research, had a methodological advantage in that it offered a method of establishing causal relations by way of comparing outcomes with the control group. In the context of evaluating energy conservation programmes, Seligman and Hutton (1981) regarded experimental evaluation to be advantageous and feasible. Experimental evaluation provides a “scientific basis for making decisions about the worth of a particular program and for accumulating knowledge about how to improve society” (*ibid*: 55). Such a method may be used to test effectiveness of information campaigns, generating useful feedback information essential for subsequent design of more effective communication interventions to promote sustainability. In their note on the importance of establishing feedback information, Seligman and Hutton (1981: 67) listed two reasons:

First, it is necessary to provide the policymakers with information about the program’s effectiveness in light of its objectives. Second, it is important to determine why a program worked, so that subsequently it can be improved and its cost reduced if possible.

In experiments conducted in natural settings, as was the case in this study, encouraging experimental group exposure to campaign materials may not be an option, to avoid exaggeration of experimental treatment effects. To overcome this restraint, evaluation could be done in collaboration between research bodies and implementing agencies. When campaign organisers are independent from campaign evaluators, extra efforts may be taken by campaign organisers to enhance exposure; for example, by notifying the target population of the upcoming campaign. In this way, exposure to campaign may be enhanced while maintaining objectivity of the evaluation.

Despite it being an undertaking of great complexity, strategically framed mediated messages about sustainability are a crucial element in efforts to enhance public understanding and support for

sustainability initiatives. Where possible such interventions should be evaluated. Although the complexity and costs of controlled experimental designs are likely to restrict evaluation of communication interventions in this format, evaluation of some form is nevertheless important. In comparison to true experimental designs, the quasi-experiment is more easily implemented and requires lesser cost and time. Controlled quasi-experimental designs are therefore recommended for future communication campaigns on sustainability.

The findings in this study showed that community understanding of the meaning of sustainable consumption increased after exposure to a strategically framed information campaign. Such an understanding was regarded as a pre-requisite for public support towards sustainable consumption initiatives. New Zealand's Ministry for the Environment indicated: "The extent to which we can alter our patterns of production and consumption is partly a matter for society to decide through laws, ethics, fashions and customs, and partly a matter of economic feasibility" (Ministry for the Environment 1997: 4). "Economic feasibility", however, according to the ministry, "is heavily constrained by markets (e.g. customer desires), resources (both natural resources and the creative ingredients of human knowledge and labour) and by the legacy of past practices such as the infrastructure, technology and attitudes of the main economic sectors" (*ibid*: 4). It is argued that the development of explicit sustainable consumption policies in New Zealand would better enable initiatives towards sustainability. Sustainable consumption addresses the unsustainable production and consumption cycles that caters to advertising driven consumerism, and hence, addresses the market driven constraint – "customer desires" – that the Ministry for the Environment has identified. The public do have a large capacity for bringing about sustainable consumption practices in society. However, before this can happen, there first needs to be further appreciation of the principles of sustainable consumption among the public, and one way of bringing about such appreciation is through the initiation of further communication campaigns. The 'message framing approach' examined in this case study provides one way for improving this form of mediated communication. Furthermore, as noted in Chapters 3 and 4, further development of the 'message framing approach' appears warranted since it offers a way for improving the framing of S&E news which may then be included in training and education programmes in building journalists' news reporting skills.

Chapter 7

Discussion & Conclusion: The Next Steps to Improving News Media Communication of Sustainability and the Environment

“Our task is to convince those who need to be convinced of the soundness of our cause and the benefits which will accrue to all men from its adoption. Intelligently planned and properly presented...it will earn the support of a sufficient number of persons to enable it to get away to a good start.”

(Montagu 1951: 118)

7.1 Introduction

Quite akin to the cause of social manifestation of human love that Montagu (1951) speaks of, the cause of sustainability is one that is very sound, yet convincing people on the need for action and the benefits to be gained from such action has been a difficult task for conservationists, governments, educators, and environmental communicators. As set out in Chapter 1 of this thesis, although the concept of sustainability has increased in prominence as a result of a global effort to address environmental and social inequality problems, many have noted a key problem to be a lack of public understanding of this concept. In addressing this problem, this thesis focused on how news media communication of sustainability and environmental (S&E) issues could be improved, considering that one way to enhance public understanding would be through such communication. This was a particularly important undertaking considering that hardly any prior media studies on this topic have focused on ‘approaches to improvements’ as a key theme.

Earlier enquiries on media communication of S&E issues, as detailed in the review of literature in Chapter 2, further reinforced the importance of this research undertaking since many have observed that the media are often the public’s major source of information about S&E issues. Some media effects studies have regarded the media to be somewhat influential in shaping public perceptions and conduct, as well as the policy making process. In addition, many media content studies have also derived that although the news media do cover S&E issues from time to time and this has contributed to public information, their coverage contain many inadequacies. It is often the criticism that coverage is insufficient and lacks depth, informing but not educating. Another criticism is that coverage is only given to S&E stories when they are sensational, while little attention is given to issues that have a slow build up over time. Many have noticed the tendency of the news media to focus on events at the expense of contextual information. Although the bulk of media research on this topic appears to have identified a wide range of inadequacies in the media’s coverage of related issues, hardly any enquiries have focused on how mediated communication of these issues might be improved. This observed lack helped set the directions for the focus of this

research which was an exploration of approaches for improving news media communication of S&E issues.

This study proposed that the aforesaid improvements could be achieved through several approaches which were examined in the preceding four analytical chapters. Firstly, it was proposed that the ‘educational approach’ of building journalists’ knowledge on S&E issues could improve communication of these issues in the mainstream news media. This approach was examined in two case studies detailed in Chapters 3 and 4 of this thesis. Secondly, it was posited that a degree of mainstream media receptiveness towards a responsible role in communicating these issues, i.e. a ‘social responsibility approach’ would be necessary for improvements to occur. This approach to improvement was examined in the third case study, described in Chapter 5. Finally, considering the various constraints of the mainstream media and the limitations in their news making process, it was proposed that another way to improve mediated communication of these issues would be through a ‘message framing approach’ – explored in the final case study reported in Chapter 6. As has been clarified in the preceding chapters, these ‘approaches to improvement’ have hardly been proposed as such in the literature, and in cases where they have received some prior address, neither their effectiveness nor their viability have received substantial address. Therefore, the focus area of this research takes media research in this topic a step forward.

In Chapter 1 of this thesis it was laid out that the intent of this research was to address an identified contemporary problem – i.e. the lack of effective communication of S&E issues in the news media. Falling within the category of ‘real-world research’ as described by Robson (2002), the hopes and intentions of this thesis was to generate knowledge that would be of use to a range of stakeholders with an interest in mediated communication of S&E issues as a method for encouraging social change for sustainability. Hence, in addition to laying out the key findings of the above four case studies and their implications for the core aim of this thesis, this conclusion chapter also provides recommendations for the advancement of the three ‘approaches to improvement’, notes their advantages and limitations, points out the various other interconnected factors that can have an effect on their viability, and suggests areas that would require further research. This was especially important considering that in the real world improving news media communication of S&E issues would require far more than the set of three linear processes to improvement inspected in this thesis.

In brief, this chapter aims to situate the assessment of the ‘educational approach’ (impacts of relevant journalism training and education), the ‘social responsibility approach’ (receptiveness of mainstream media towards a more responsible role in communicating S&E issues), and the ‘message framing approach’ (impact of a strategically framed information campaign concerning sustainability) within an analysis of the wider changes that would need to occur and other

interrelated factors that would need to be taken into account in order to achieve improvements to news media communication of sustainability and the environment. For this purpose this chapter is divided into six sub-sections. Following this introduction, Sections 7.2 to 7.4 will detail and discuss the key findings from the explorations of the ‘educational approach’, the ‘social responsibility approach’, and the ‘message framing approach’ respectively. Section 7.5 lists and discusses the various interrelated factors that have a bearing on the three approaches to improvements. Finally, Section 7.6 ends this thesis with a brief synthesis.

7.2 The ‘educational approach’

This section presents a summary of the key findings of the initial two case studies of this thesis, which were explorations of the ‘educational approach’ of building journalists’ knowledge as a means for achieving improvements to news media communication of S&E issues.

The first case study, detailed in Chapter 3, examined the long term impacts of a series of mid-career training programmes in environmental reporting employing a *post-retrospective-pretest* method. Findings were indicative that such mid-career training for working environment reporters can contribute to their knowledge and understanding of related issues. Such knowledge, in turn may result in a higher accuracy in the technical and scientific details within the news reports they produce. This case study also found that training can improve reporting skills, and information sourcing and evaluation skills, which in turn may lead to an increase in the quality and quantity of S&E news reporting. In addition to learning from the training itself, it was observed that trainees also learned from their interactions with the trainers and other participants. It was also observed that training may result in beneficial unintended impacts such as enhanced job satisfaction, a motivation to specialise in environment journalism, and positive changes to environmental views and behaviour. Trained journalists may also cause an impact in the newsroom by publishing articles produced during training, and by sharing the acquired knowledge and enthusiasm with other journalists.

Drawing from the above key observations it was concluded that the mid-career training did result in overall positive impacts; findings thus support the ‘educational approach’ as a recommendable method for achieving improvements to news media communication of S&E issues. The strength of this approach is further enhanced when we consider previous observations (Mbuya 1992; Sachsman *et al.* 1988; Sandman *et al.* 1987; Valenti and Tavana 2005) that have also noted positive outcomes of training programmes and workshops in environmental reporting. Collectively these observations help build the argument for the necessity of future training in this field in order to achieve improvements to mainstream news media coverage of S&E issues.

However, this study also found that although mid-career training in environment reporting may increase reporters' knowledge and skills, this may not automatically result in immediate outcomes in news coverage as these reporters may still be constrained by other factors such as lack of time, negative employer reception, or changes to their assigned reporting area. To address these problems it is imperative that training organisers take the necessary initiatives to ensure that trainees are given a positive reception and an enabling atmosphere when they return to work (Kirkpatrick 1994). This may be aided by a learning contract which can ensure that trainees receive support from their editors in putting what they learned into practice. Such a contract may also include conditions such as the publication of a specified number of news reports on S&E topics upon completion of the training.

In reality however, participation in such mid-career training is more likely to be an exception than a norm for reporters covering this area, and this is likely the case in most countries. For a majority of the journalists from developing countries surveyed in the first case study, the mid-career training in environment reporting was the first of such training they had ever participated in. As revealed in the third case study in Chapter 5, almost all journalists covering the environment round in New Zealand did not have any prior training in environment reporting. In the same way, as detailed in Chapter 2, many others have previously observed the lack of mid-career training in this field. It appears to be a common practice among media organisations to assign reporters into specialised rounds such as health or the environment despite their lack of knowledge in the respective areas (Begbie 2002). The lack of such mid-career training initiatives may be attributed to the fact that there is no one particular institution or body with the responsibility of organising such training. As it appears, previous training initiatives have been *ad-hoc* and largely organised by non-governmental organisations and international institutions. Another reason could be the high costs involved and the difficulty in securing sponsorships for such training. As Friedman (1983) and Leal and Borner (2005a) have stressed there is definitely a need for sponsorship of mid-career training programmes especially for journalists covering S&E issues. These are some real world problems that would need to be addressed if successful improvements to mainstream news media coverage of S&E issues are to be achieved through the application of the 'educational approach' of organising mid-career training for working journalists.

Furthermore, the lack of journalists' participation in mid-career training may also be partly attributed to editors' fear that trained journalists would leave for better jobs, insist on specialised reporting, demand more salary or reject editorial interferences (Friedman 1983; Berger 2003). In some cases, understaffing means a journalist's time cannot be spared for training (Friedman 1983; Berger 2003). Some editors may regard a particular area of training as irrelevant to their organisation if they do not cover that speciality area (Friedman 1983). Berger (2003) pointed out that in most cases, employers are hesitant to pay for training, and very few have policies that

include training as part of their human resource development initiatives. Friedman (1983) asserted that in order for environmental reporting to improve, there is a need for a change in attitude among editors towards training. This point brings us to an important inference that may be drawn from the first case study of this research – since it showed positive training outcomes and their potentials for improving the performances of media organisations – the communication of these findings (together with other similar documented examples) to media managers may serve as an effective way for encouraging their positive attitude towards training. Their positive attitude in turn may have a feedback loop effect in the organisation of more of such mid-career training programmes.

The second case study of this thesis examined the ‘educational approach’ within the context of tertiary journalism education. The ‘educational approach’ implemented within university settings appeared to address some of the limitations of the mid-career training approach noted in the preceding paragraphs – i.e. the *ad-hoc* nature of their organisations, their high costs and dependence on sponsorship, and difficulty in enrolling busy working journalists. In addition, mid-career training programmes are usually short-term (Becker and Lowrey 2000); thus, limiting what can be included. By contrast, a semester-long university module can better provide the time needed for students to learn this complex reporting topic.

As detailed in Chapter 4, the second case study used a *one-group pre-experimental* evaluation to gauge the impact of a pilot module on sustainability introduced to a graduate diploma in journalism programme. It was observed that students exhibited a significant increase in their understanding of sustainability after undergoing the module. Furthermore, students realised that sustainability was an angle that could be incorporated in other areas of reporting. A majority also indicated that their interest in reporting S&E issues increased as a result of the module. Students became more sensitive to the need for increased media coverage in order to enhance public awareness about sustainability issues. The study also found that upon graduation, one student from the programme was able to apply what she learned from the module to her job as a journalist. Likewise, in his assessment of an environment and science journalism course in Uzbekistan Freedman (2004) found that the course enhanced students’ awareness of the state of local environmental problems and their perceptions about the importance of the role of an environment journalist in enhancing public awareness. These findings added further strength to the argument for the ‘educational approach’ as a recommendable method for achieving improvements to media coverage of sustainability and the environment. It may thus be argued, as did Friedman (1994), that growth in environmental journalism education can in the long run lead to improvements in news media coverage of related issues.

However, findings in this study also showed that only two educational institutions in New Zealand have incorporated S&E subjects in their journalism curriculum. This means that the majority of

journalists entering the workforce in New Zealand will continue to lack background knowledge in S&E issues. Therefore, the lack of quality in sustainability issues coverage in New Zealand media that advocates and proponents in the third case study of this research pointed out, and the shortcomings that others have noted in the literature (see for examples, Bell 1994; Dew 2001; Henderson and Weaver 2003; Rupar 2007; Sawyer 2006; Spellerberg *et al.* 2006) could be partly attributed to this lack in background training and education.

Considering that mid-career training is much more difficult and expensive to organise, tertiary education institutions, in particular those offering journalism and communication programmes, have a particularly important role to play if the ‘educational approach’ is to be widely employed as a measure for achieving improvements to news media communication of S&E issues. Educational institutions could make a significant contribution by providing journalism students with the preliminary background knowledge to cover these complex subjects. This may not necessarily steer students’ interest towards environment journalism, nor should it be the objective of such a curriculum; however, providing an introduction to S&E issues as a significant reporting area could prepare students to be better able to make the connection between these issues and other aspects of society when reporting news. The *Journalism Training Organisation* responsible for setting the standards for journalism training in New Zealand could take the necessary steps to fill the gap in related education and training and ensure the prominence of S&E topics within the journalism curricula.

In brief, the ‘educational approach’ of building journalists’ knowledge through training and education may be seen as one with good potentials for bringing about improvements to news media coverage of S&E issues; however, the success of this approach in the real world would be dependent on sponsorship and a steady organisation of such training programmes, employer reception of trainees, employer attitude towards training, and a more significant presence of S&E topics within the tertiary journalism curricula.

7.3 The ‘social responsibility approach’

The preceding section detailed the advantages and limitations of the ‘educational approach’ of journalists’ knowledge building as a means for achieving improvements to news media coverage of S&E issues. This section summarises the main findings of the third case study detailed in Chapter 5 which examined the second ‘approach to improvement’ proposed in this thesis – i.e. the ‘social responsibility approach.’

Recapping the points derived from the literature in Chapter 2, it appears that on the one hand, some have pointed out various reasons why the media are restricted in their educational abilities. Even so, considering public dependence on the media for S&E information, and the consequent impacts

resulting from that dependence, others on the other hand, have stressed that the media would need to play a more proactive educational role to enhance public understanding of these issues – giving rise to what might be termed a *principle of media responsibility in environmental education* as an expression of media's social responsibility. In addition, many have suggested the need for editorial policies, programming policies and corporate social responsibility aims of the media concerning S&E issues coverage suggesting that a second way for the media to express their social responsibility would be through the adoption of a *media environmental policy*. Through interviews with media managers and a survey of working environmental reporters the third case study of this thesis sought to find out the receptiveness of newsmen towards such an educative role and related policies.

Findings were indicative that media managers and reporters in New Zealand were receptive towards a *principle of media responsibility in environmental education* although this receptiveness was somewhat conditional. For instance, although they acknowledged such a responsibility, when presented with excerpts from the United Nations Decade of Education for Sustainable Development (UNDESD) implementation plans that indicated the specific educational role of the media, none were affirmative that they would consider initiatives for the UNDESD because of underlying beliefs about the autonomy of the news media. Some media managers also affirmed that educational contents are unlikely to be in news or in current affairs. This was to ensure their editorial independence. Nevertheless, over half indicated that initiatives for the UNDESD were possible. Reporters and editors of mainstream newspapers also pointed out that they were already playing an educative role through the *Newspapers in Education* programme. Evidencing an educational non-news media content, New Zealand's TV3 had aired a weekly programme titled, *WASTED! Waging War on Waste* in early 2007. The programme assessed the ecological footprint sizes of homes in New Zealand, and provided recommendations on energy savings and other behavioural changes.

The above findings suggest that while it may be feasible for the mainstream media to carry non-news educational content, the incorporation of educative messages in news may be somewhat less doable because of underlying beliefs about editorial independence and neutrality. Furthermore, the New Zealand mainstream news media's capacity to take on an educative role may be somewhat limited considering that the majority of reporters covering S&E issues do not have relevant background education in S&E issues.

This study also found that the majority of reporters and media managers in New Zealand were not receptive to the idea of a *media environmental policy* for the inclusion of S&E matters in media content. This was particularly so for the content of news. This was somewhat contrary to observations derived from the first case study of this thesis where a majority of journalists from

developing countries indicated a belief that a major role of an environment reporter was to educate the public and a few of these journalists also believed that having the necessary editorial policies in place could ensure increased coverage of environmental news. While this may be a result of differences in journalistic traditions between Western and non-Western countries, in general, as Sandman (1974) notes, there are four barriers that may deter mass media effectiveness in environmental education: information sources; advertiser and management pressure; resource problems; and, norms of news definition. Sandman concluded that “environmental news cannot begin to serve the needs of environmental education until some or all of these barriers are removed” (*ibid*: 242). LaMay (1991) maintained that educative reporting would be a problem for most reporters since journalism training does not include teaching skills. Moreover, he noted that the environment is too broad a topic, “with roots in the humanities – philosophy, history, economics – and the natural sciences”; therefore, teaching about the environment would be beyond the capacity of most reporters (*ibid*: 110). Still, LaMay suggested that morally it would be better for reporters to attempt to teach, than merely provide information.

The above points raise an important connection between the ‘social responsibility approach’ and the preceding ‘educational approach.’ For the news media to take on an effective educational role in reporting S&E issues, journalists and editors alike would require the appropriate training and education – one that includes not only the skills for good environmental reporting, but also aspects of educative reporting. However, considering the newsperson’s firm hold on their editorial independence that this study observed, initiatives towards educative news reporting may be feasible only if such reporting is perceived to be unthreatening to the news media’s autonomy.

In this study, although the reluctance among mainstream media managers towards establishing a *media environmental policy* for the purpose of improving their coverage of S&E issues appear to reflect a reluctance towards a ‘social responsibility’ in S&E communication, this reluctance may be a result of a need for autonomy rather than a disregard for the environment or sustainability. This was considering that a majority were receptive towards a *responsibility in environmental education*. For the establishment of an *environmental policy* within a media organisation it may first need to be seen as unthreatening to their independence. Such a policy may also need to clearly distinguish differences in how it determines the coverage of S&E issues in news and in other non-news media contents. Ascertaining media responses towards the proposal for *media environmental policies* would require further in-depth inspection beyond what was covered in this study. Further studies in this area could take into account suggestions made by Porter and Sims (2003) that rather than posing as a threat to their independence, an official policy commitment on the part of the media to cover sustainability issues could instead improve their transparency and accountability, and provide media organisations with several advantages including governmental support and

funding considering that enhancing public awareness of sustainability is a well established aim of most governments.

The ‘social responsibility approach’ expressed through the establishment of *media environmental policies* also warrants further research because of its implications for the preceding ‘educational approach’. Berger (2003) pointed out the reluctance among media employers to incur the costs of training and the lack of policies in place that see training as significant for human resource development. Hence, it may be argued that the adoption of *media environmental policies* may address this problem of the ‘educational approach’ as such policies are likely to be supportive of building journalists knowledge as a means for achieving improvements to media coverage of S&E issues. Another important implication of the ‘social responsibility approach’ for the preceding ‘educational approach’ is that the establishment of explicit *media environmental policies*, especially when made clear within the public domain, could send out a feedback signal to providers of journalism education and thus encourage a curriculum reform and the provision of a more prominent space for S&E news reporting within the journalism curricula – in order to meet the needs of the media and demands of a journalists’ job. Furthermore, *media environmental policies* made available in the public domain has the potential to enhance media’s accountability towards how they cover S&E issues and the resultant effects of their coverage, and their commitment to a social responsibility in this area.

In brief, based on the findings of this case study, it may be assumed that the mainstream media in New Zealand appeared receptive to a *principle of media responsibility in environmental education*. However, although they were receptive to a responsibility in providing educational non-news content, they were less receptive to a role in intentionally educating through news reporting. Although the lack of receptiveness of the mainstream media towards *media environmental policies* suggests that it may not be a feasible approach for improving media coverage of S&E issues it is an approach that warrants further enquiry because of its interconnected link with the ‘educational approach’ and its potentials for improving media coverage by increasing media’s transparency, accountability, and social responsibility. It is argued that to achieve the intended improvements to news media coverage of S&E issues the ‘educational approach’ would need to be well complemented with the ‘social responsibility approach.’

7.4 The ‘message framing approach’

To facilitate social change for sustainability there is a need for the communication of related messages in a strategic manner – suggesting the need for a ‘message framing approach’ for achieving improvements to news media communication of S&E issues. However, findings of the first three case studies of this research as noted above and other observations in the literature indicate that the mainstream news media are limited in many ways in their capacity to frame S&E

news in a manner that sustainability advocates and environmentalists would like them to. One important observation was their limitations in incorporating educative aspects in S&E news – which may require the strategic framing of news in a persuasive manner. The framing of news is instead governed by traditional journalistic norms such as objectivity and balance. News selection is often guided by traditional news value determinants that may not necessarily fit with the nature of S&E issues.

Furthermore, as has been noted in Chapter 2, the mainstream media have the added pressure to attract a good number of readers and viewers for their advertisers. If environmental content does not attract sufficient interest, then the chances are that coverage of related issues will dwindle away. Even public service broadcasters are not completely exempt from being influenced by audience figures (Harrabin 2000). Moreover, the environment is only one of many topics that the mainstream media has to deal with (Dennis 1991); hence, when there are competing topics, S&E stories may become sidelined. Considering the constraints of communicating S&E issues through the mainstream news media, it appeared necessary to convey these issues through community and alternative media that tend to have fewer restrictions in the presentation of news and are less dependent on advertisers. However, despite their potentials the engagement of alternative media in such communication has hardly been examined in academic literature.

In light of the above, a fourth case study, as detailed in Chapter 6, was undertaken whereby an information campaign on the topic ‘sustainable consumption’ was designed based on the ‘message framing approach’ of employing theories and recommendations for effective and persuasive communication in message framing and implemented via a community news medium in Christchurch, New Zealand. Considering reports about their negative aspects and disadvantages, the notion of altruism and sacrifice; the usage of the so-called ‘doom and gloom’ approach and overwhelming information; and, fear, guilt, and blame tactics were avoided in the framing of the campaign messages. Although points about the extensiveness of environmental problems such as waste volume and percentage of polluted sites were unavoidable, these were brief, fact-based and locally relevant. Presentation of some quantitative information concerning the communicated problem may be an advantage since it provides an appeal to logic and serves as a believable substantiation for the advocated cause and hence enhances the persuasive effects of the communicated message. As has been recommended for a more successful communication, the campaign articles were framed to provide an emotional appeal; emphasise the personal benefits and intrinsic satisfaction to be gained from sustainable consumption behaviour; and, encourage individual actions that can be taken in addressing the problem.

‘Sustainable consumption’ was purposefully selected as the campaign’s topic; as explained in Chapter 2, this was considering its apparent neglect as a topic of discussion in the public arena

despite it being an important sustainability concept that offers viable solutions to the present day problem of unsustainability. The campaign's three broad goals were: to enhance understanding about 'sustainable consumption'; to enhance awareness about the negative social and environmental consequences of consumerism; and, to enhance awareness about the use of psychology in advertising to create consumer demand for non-need items.

The *controlled quasi-experimental* evaluation employed to test the campaign's impacts found significant increases to community understanding of 'sustainable consumption' and to the number of parents who expressed concern over advertising effects on their children's consumerism. The campaign also caused a non-significant increase in the perceived necessity for sustainable consumption policies. However, considering the limits of the campaign, its modest scale, and its implementation in real-world settings, the resultant impacts were regarded as provisional empirical evidence of the potentials of the 'message framing approach' proposed in this thesis for improving mediated communication of S&E issues.

It is suggested that such campaigns in future could be improved by engaging a wider range of communication channels and by appropriately repeating messages to increase probability of exposure. Campaign organisers may also enhance effectiveness by employing community-based strategies and a more participatory approach (rather than a top-down communication approach or an information-intensive approach) that takes into account people's perceptions and needs, and encourages their involvement in the design and implementation process. For a more comprehensive communication strategy employing a 'message framing approach', strategists would need to broaden their search for insights. By using the best combination of strategies garnered from cognitive psychology, persuasion methods, motivational methods, communication psychology, ecopsychology, behavioural psychology, economic psychology, environmental psychology, and even advertising techniques, more effective message framing strategies may be developed. How strategies from these various fields might be employed in the framing of S&E messages point to another area where further research is required considering the difficulty of this task. Researchers and communication strategists could incorporate mechanisms to first test the effectiveness of each communication strategy considered, preferably in lab-controlled experiments, to identify those that are most crucial for the purpose of communicating a particular environmental or sustainability issue. Considering the possibility of variations in public response to messages with different frames, as has been reviewed in Chapter 6, it is also recommended that messages are rigorously pilot-tested to determine their possible effects before implementation.

Inferences may also be made about the value of the 'message framing approach' for the 'educational approach' since building journalists' knowledge and skills in environmental news reporting would need to include building their skills in the effective framing of news messages. For

instance, some students, in the second case study of this research pointed out that in addition to knowledge about S&E issues, a journalism module on sustainability need to also include a session on how to write such news stories. This in turn points to another area where further research appears necessary – methods for improving the framing of S&E news, which may then be incorporated in training and education programmes.

The present case study also illustrates the potentials for engaging alternative media in such communication as several advantages were observed. Firstly, they are able to provide channels for the implementation of strategically framed awareness raising campaigns that may not be easily implemented via the mainstream media (unless perhaps when the media space is paid for). Secondly, the editor of the community newspaper was very supportive of the campaign objectives; she assisted in providing comments on the campaign articles, and in organising and providing the premises for a group discussion for its pre-testing. In addition, publication was possible without editorial interference and two full pages were allocated for the articles in each issue at no cost. Thus, it may be put forward that alternative media are likely to be supportive of the cause of sustainability and their engagement in related communication needs further exploration in terms of their potentials, their outreach and their effects.

In brief, this case study found the ‘message framing approach’ to be a potentially effective way for improving mediated communication of S&E issues. The study also noted that engaging alternative media in the communication of S&E issues allows the employment of persuasive and effective communication strategies and the arena for in-depth information that may not be possible in mainstream news media. Among the three approaches examined in this thesis, the ‘message framing approach’ appears to be the one that requires the most attention in terms of further research. Knowledge of and information about effective communication appears to be scattered across a wide range of fields such as health communication, risk communication, business communication, political communication, interpersonal communication, communication psychology, and advertising and marketing. By extracting from these fields and others that are known to influence human thought, motivation and behaviour (e.g. theology, spirituality, ecopsychology, economic psychology) a more significant compilation of message framing strategies may be developed. This is of particular importance as the ‘message framing approach’ appears capable of informing not only S&E campaigners, but may also serve as a useful tool for journalism educators in the teaching of S&E news reporting.

7.5 Other interrelated real-world factors that may determine the success of the above approaches

The foregoing sections have summarised the key findings of the four case studies that formed this research which analysed three broad approaches for improving communication of S&E issues in

the news media – i.e. the ‘educational approach’, the ‘social responsibility approach’ and the ‘message framing approach.’ The strengths and limitations of these approaches were noted and there appeared to be a need for implementation of all three approaches because of their interconnected links with each other. For instance, the ‘educational approach’ appeared to have interdependent links with the ‘social responsibility approach.’ A stronger sense of social responsibility on the part of the media in providing a form of environmental education means that they would tend to be more receptive towards the education and training of journalists in S&E issues. Such reception in turn provides an incentive for the expansion of the ‘educational approach.’ The development of the ‘message framing approach’, on the other hand, may be instrumental in the teaching and training of environment journalists. Because of such interconnected links, it appears that the three approaches to improvement would need to be implemented through a broader and more integrated effort towards achieving improvements to news media communication of sustainability and the environment.

In addition, the success of the three approaches also appears to be dependent on the cooperative actions of other stakeholder groups and a range of other interconnected determining factors that may have an effect on the news production process. For instance, the ‘educational approach’ appeared to require coordinated actions by educational institutions, journalism training providers, and sponsoring bodies among others. Since addressing S&E issues concerns the solution of a commonly shared problem and the promotion of a commonly shared interest, it may be argued that the principle of cooperation and the sharing of responsibility should apply when it comes to their mediated communication. Moreover, considering that information pertaining to S&E issues is complex, the responsibility towards public information should not solely lie on the shoulders of reporters and the news media alone. Therefore, this thesis suggests the necessity to perceive mediated communication of S&E issues as a shared responsibility amongst the many stakeholders with an interest in these issues – scientists, academics, educational institutions, governments, interest groups, advocates, businesses, the public and the media.

Drawing specific observations from the four case studies and connecting these to other critical points that have been raised in the literature this section will discuss the interrelated connections of the above three ‘approaches to improvement’ with other factors and aspects within the reality of the media world. The following eleven points thus illustrate some of the challenges and factors that would need to be considered for the successful implementation of these approaches:

7.5.1 Continuity in journalists’ knowledge building

One important factor that may determine the effectiveness of the ‘educational approach’ in the real world is its continuity. Mid-career training or even a semester long university course in environment reporting is likely to be a one-off experience that can boost journalists’ knowledge in

this area. Because scientific findings and technical information concerning S&E problems are constantly advancing, the 'educational approach' would need to be implemented as a constant and ongoing process. To gain up-to-date knowledge of S&E issues journalists may need to acquire firsthand information directly from the literature – for instance, as Gelbspan (2004) suggests, from peer-reviewed journal articles as opposed to the conventional approach of relying on secondary sources of summarised information. Environment reporters would need to continually strive to build their scientific literacy in order to accurately convey information, first to their editors, then to their audiences (Case 1992). This literacy would need to go beyond clear-cut S&E issues, to include other indirectly connected topics.

To some degree, resources available to environment reporters have increased. For example, the *Society of Environmental Journalists* (SEJ) offers a variety of resources through its website (Bruggers 2002). However, resources available online are accessible only to journalists who have access to the Internet. This channel of resource and other forms of data and information are not always available to journalists from developing countries (Kelly 1999; Freedman 2004). Surprisingly, one New Zealand-based reporter in this study indicated that his organisation allows only restricted use of the Internet. As the Internet is a rapidly accessible information source, journalists would need to be provided with this facility to build knowledge. In addition, there are vast amounts of information that are published in the form of books and scholarly articles that are not readily accessible to journalists without a trip to a good library. Therefore, endeavours within an 'educational approach' would need to establish a more accessible information base for journalists in this field.

Even when information is readily available, journalists' time constraints may prevent the necessary reading and learning to build knowledge. This study found that environment reporters in developing countries as well as in New Zealand faced the same problem of lack of time. In fact, lack of time was the most frequently indicated problem for both groups. In addition to being an impediment to the essential knowledge building process time constraint may also restrain in-depth reporting and investigative reporting.

In brief, to ensure the effectiveness of the 'educational approach,' reporters would need to be provided with not only the necessary access to resources and information but also the time for continuous building of knowledge. Without such a knowledge building process, environment reporters are likely to continue with the trend of simplistic reports on S&E issues which would in turn continue to receive criticisms when these reports are scrutinised by media content researchers. This is a particularly important problem area in the real world that would need to be addressed in order to improve S&E news coverage in the mainstream media employing the 'educational approach.'

7.5.2 Trainers, educators and relevant teaching materials

A trainer who was involved in the mid-career training appraised in the first case study of this research indicated that among others, “investigative journalism techniques” was an additional skill that he required as a trainer. Another trainer highlighted that resources were also necessary to keep training materials up-to-date. A journalism educator of a New Zealand university in the second case study indicated that one problem he faced in conducting a journalism course in environmental reporting was that he was solely responsible for designing the course materials. These observations suggest the need for training and support for environment journalism educators and trainers for the advancement of the ‘educational approach.’

There appears to be a lack of educational models, references, and guides for teaching environment journalism (Casey 1998; Friedman 1994; Grossman and Filemyr 1996). In reviewing the literature for this study it was observed that although there were several available handbooks on environment reporting (Nelson 1995; West *et al.* 1995; West *et al.* 2003) there appeared to be no specific guidebooks for reporting on sustainability. Considering the high complexity of the sustainability topic, this thesis suggests the need for the publication of a comprehensive guidebook on reporting sustainability issues that could serve as a resource for media educators and as a reference guide for working journalists. There also appears a need to develop the necessary curriculum and teaching guides, particularly in sustainability issues reporting. Further advancement of the ‘message framing approach’ is likely to be instrumental for the development of such teaching materials. Departments of journalism in universities and other tertiary institutions could organise relevant training programmes for educators and trainers in this field as well as contribute to the compilation of advanced education and training materials.

7.5.3 The status of the environment reporter

In the first case study, involving journalists from developing countries, one reporter indicated that the general perception among journalists in her country was that environmental reporting was not a financially fruitful career. Likewise, in New Zealand, as was expressed by one student of journalism interviewed in the second case study, there was a perception that environment journalism was not a good career choice because it lacked prospect. Although not a majority view, this observation raises concerns about the perceived status of the environment reporter. Ward (2002) noted that environmental reporters in the United States did not receive respect in the newsroom. Many were labelled as “environmentalist reporters” which they regarded to be a “derisive nickname” (*ibid*: 40). Ward also noted the tendency among non-environment editors and newsroom staff to view the environment beat as dull despite its importance.

On the other hand, an earlier observation of environment reporters in the United States found that these reporters were satisfied with their beat despite corporate pressures, low salary and a shrinking autonomy (Rogers 2000). These reporters believed that what they did was valued by their editors and readers, and they were aware of the importance of the stories and that things changed as a result of their reporting (*ibid.*). In another study of environment reporters in the United States, Sachsman *et al.* (2006) observed that a majority were satisfied with their jobs since in addition to the extrinsic reward of a salary these reporters gained an intrinsic satisfaction as they were able to satisfy an aspiration to help.

In addition, as was observed in the first case study of this research, mid-career training is another factor that may enhance reporters' job satisfaction. Over half of the journalists surveyed reported enhanced levels of job satisfaction after the training. Many of these journalists also indicated that a major factor that contributes to their level of job satisfaction was recognition of their work. Some also indicated that being able to provide a public service, positive feedback from supervisors, and public appreciation of their work to be factors that contributed to their job satisfaction.

The above interrelated factors have important implications for future initiatives in improving mainstream media coverage of S&E issues. If improvements to media coverage are to be achieved through the appointment of an environment reporter, the status of this position would need to be seen as one that is not only intrinsically satisfying for the reporter, but one that is recognised in the newsroom. To improve environment journalism, a survey report by *American Opinion Research* recommended that the environment beat should be raised to a similar status as the government or politics beats (Garneau 1993). The 'educational approach' and the 'social responsibility approach' examined in this thesis have the potential to bring about this recognition as their implementation can elevate the status of the field of environmental news reporting in addition to enhancing the feelings of job satisfaction among reporters in this field. The significance of the job of these reporters may also be recognised through the presentation of special awards. Leal and Borner (2005a: 13) suggest that one way "to foster a sense of personal responsibility and greater motivation and commitment towards sustainable development" among journalists is through the establishment of professional awards that symbolise "public recognition of their professional contribution." Examples of such professional awards of international recognition include the *Reuters-IUCN Award for Excellence in Environmental Reporting* and the *Conservation International Biodiversity Reporting Award* (*ibid.*). In New Zealand, some locally recognised awards such as the *Environment Bay of Plenty Environmental Journalism Award* and *Environment Canterbury Award for Excellence in Environmental Journalism* could aid reporter recognition.

7.5.4 News media editors

Complaining “about editors [may be] an age-old tradition in journalism” (Sachsman *et al.* 2002: 430); still, editorial support or the lack thereof appears to be critical for the coverage of S&E news in the mainstream media. In this study, journalists from New Zealand and developing countries alike indicated their editors to be one of the constraints to environmental reporting. In the case of the latter group, it was found that although the mid-career training in environmental reporting they underwent enhanced their knowledge, skills and enthusiasm, their ability to increase reporting and to cause an impact in the newsroom was constrained by other factors which included their editors’ lack of interest or support. The reality of the news media world is that even the most dedicated environment reporter does not “have the institutional power to give stories the prominence they deserve” without the agreement of the news organisations’ key decision-makers (Alexander 2002: 46). Sachsman *et al.*’s (2002: 430) study of specialised environment reporters in New England, USA, found that editors ranked eighth in a list of seventeen barriers to environment reporting. They also observed that reporters who had supportive editors appeared to be more successful in getting their stories published or broadcasted. Reporters with supportive editors were also “more likely to have taken short courses since becoming a journalist” (*ibid.*: 432). Providing an account of his own experiences as a journalist at *Time* magazine, Alexander (2002) asserted that it was the support of his managing editor that led to his success in the extensive environmental stories he initiated in the magazine in the late 1980s.

The above accounts give evidence to the significance of editorial support in ensuring that S&E issues are given priority. However, “most news editors, commissioning editors or TV controllers come from an arts background and culture” which makes convincing them of the significance of science oriented environmental stories a difficult task for journalists (Farrow 2000: 189). It is often the case, that a journalist would spend extensive time researching to ensure the legitimacy of a story “only to have an editor who did not understand ecological principles junk the idea” (Keating 1997: 11). Moreover, as Witt (1973) points out, editors are limited in their ability to make judgements about public needs since most of the public feedback flows to the reporters who are in direct and regular contact with public members. By comparison editors have very little direct engagement with the public. “This means that the very individuals with the most gatekeeping power along the information chain in the mass media are the individuals least aware of public wants and needs and least responsive to change” (*ibid.*: 62).

The above suggests that the application of the ‘educational approach’ proposed in this study may need to be extended to news media editors and other key decision makers of the news media. In fact, over half of the reporters from New Zealand surveyed in the third case study of this research indicated that training for editors and news directors is a necessity for improvements to their organisation’s coverage of S&E issues. In the same way, over a quarter of journalists from

developing countries surveyed in the first case study suggested that the training and education of editors may serve to enhance their sensitivity towards environmental issues. This case study also found that among the journalists who underwent the mid-career training in environmental reporting, a significantly higher number of those who held decision making positions within their organisations indicated organisational impacts and attempted to influence other journalists in their organisations to do more environmental reporting. Likewise, one environment reporter in Archibald's (1999: 31) study suggested that it would be useful "to send at least one editor to seminars and workshops on environmental journalism" since editors with such background knowledge would be better able to see the importance of these stories and "help push to have more of them in the paper."

Given the above observations, this thesis argues that knowledge building of media decision makers on S&E issues through the 'educational approach' could ensure higher probability of organisational impact, in terms of enhancements to S&E reporting. Training targeted at editors and decision-makers could also be an effective measure to address the problems reporters face in gaining editorial support in covering related issues. In addition, the 'educational approach' may also address other problems that result from the tendencies of media managers – for instance, their tendency to perceive of the interest in environmental issues as short-lived when the issues fail to demonstrate a continual presence in opinion polls and government agendas (Hannigan 1995). There is also an inclination among media managers to perceive of sustainability as being a pressure-group interest (Howson and Cleasby 1996). The 'educational approach' could address these problems by bringing about changes in understanding among media managers of the nature of environmental problems which often persist over long periods of time and of the principle of sustainability which is a universal objective that every sector in society has a stake in. The latter may lead to enhanced appreciation among the media about their 'social responsibility' as one of the stakeholders in the global sustainability agenda; hence, indirectly enhancing the viability of the 'social responsibility approach' proposed in this thesis.

7.5.5 News value determinants

In the third case study of this research, the survey of reporters in New Zealand affirmed that these reporters do employ traditional news value determinants in deciding on the newsworthiness of sustainability issues. While aspects such as catastrophe, crisis, and immediate economic, societal and environmental impacts were rated as highly newsworthy, possible impacts on future human generations – the very foundation of the concept of sustainability – was rated as only moderately newsworthy. This case study also observed some differences in how journalists and proponents of sustainability made judgments about newsworthy aspects of sustainability issues.

The above observations were particularly concerning as improvements to news media coverage of S&E issues appear to require some changes to news value determinants and perhaps even a redefinition of news and its framing. For instance, fundamentally news is a report of today's and yesterday's happenings; S&E issues by contrast concern the potential impact of today's actions on tomorrow (Alexander 2002) and on the weeks, months and years that follow. In the case of climate change, if traditional determinants of news are employed this would mean "waiting until the problems become acute, [and]...obvious in the everyday experience of the public" (*ibid*: 45) before it is reported as news. By that stage, news reporting of the problem will be of little use as resultant damages may have become irreversible (*ibid*.). Howson and Cleasby (1996: 152) suggested that if the definitions of news, which requires it to be an event of recent occurrence, of human interest, of local relevance, and, involving influential personalities, are taken into account, then "many of the complex issues related to sustainability...would not be news". Typically, even experienced environment journalists are expected to resort to traditional news values when reporting (Sachsman *et al.* 1988). Hence, when it comes to reporting long term sustainability issues these journalists face a problem since such issues do not have the news value of being an 'event' (Harrabin 2000). Therefore, it is suggested here that future research may contribute towards improvements to environment journalism by focusing on how training and education may employ a 'message framing approach' that provides a way around the limitations of traditional determinants of news. Likewise, Sachsman *et al.* (1988) suggested the need for educational programmes and materials that could show how journalistic determinants of newsworthiness could be adapted to include crucial aspects in environmental news reporting such as the scientific degree of risk.

In addition to education, another way to influence news value judgement of S&E issues would be through public responses towards the coverage of such news. For instance, observing how the news media in the UK decreased their attention to the issue of global warming despite its increased significance as an issue, Lacey and Longman (1993: 229) suggested that "one way of ensuring that the power of gatekeepers [to determine news value] is constrained and that newspapers serve the long term interests of their readers" would be through pervasive public reaction to what might be termed a "manipulation of news coverage." Future research may further examine differences between journalists, experts and the public in how they judge news value of S&E issues, to gain a clearer understanding of the underlying rationales, in order to inform the news making process.

In short, journalistic judgement of news is likely to continue to be a problematic area in S&E issues coverage. While journalistic news definitions are long established traditional norms of their profession that would be difficult to change or even adjust, the nature of S&E issues do not appear to fit neatly within such definitions. Any changes to how the news value of S&E issues is determined are likely to occur only with an increase in journalists' and media managers' awareness of the nature of these issues. Such awareness may be brought about through the 'educational

approach’ and through public feedback. News value determinants are thus an important aspect that would need to be addressed through the combination of the ‘message framing approach’ and the ‘educational approach’ proposed in this thesis.

7.5.6 Journalistic objectivity and balance

As detailed in Chapter 2, many news media researchers, critics, and commentators have pointed out the problems associated with journalistic objectivity and balance in environment reporting. Some contested objectivity with the argument that environmental issues often concern human survival and are hence too important for reporters to remain neutral when reporting. Others detailed how the ‘balance’ approach can result in biased reports and cause confusion among the public about the actual status or severity of an environmental problem.

However, in the third case study of this research it was found that the majority of journalists and media managers in New Zealand did not perceive objectivity and balance in environment journalism to be problematic. The conception of irrelevance of objectivity and balance to environment journalism is likely to receive high resistance from the mainstream news media as these are deeply embedded journalistic principles.

On the other hand, this research found that adherence to objectivity was less of an issue among journalists from developing countries. As has been detailed in the findings of the first case study in Chapter 3, it was observed that many of these journalists indicated a preference for advocacy journalism, while some believed that objectivity and advocacy could be combined in reporting. While the preference for advocacy or objectivity may be dependent on the differences in journalism practice between developed and developing countries, as Detjen (2002) and Chapman *et al.* (1997) have observed, others have noted that balancing objectivity and advocacy is an issue even in developed countries like the United States (Maloney and Slovonsky 1971; Sachsman *et al.* 2006) and Germany (Dunwoody and Peters 1992).

Smith (2000b) asserted that since journalistic balance and objectivity are fundamental to the journalism profession, when the newsperson takes up the challenge of communicating environmental issues they should not be expected to shed these norms. Conversely, Gelbspan (2004) argued that while it would be acceptable to counter-balance opinions in news reports, when it concerns facts, journalistic balance should mean presenting the weight of scientific evidence. In the same way, Dunwoody (2005) suggests that problems associated with the norms of objectivity and balance in environmental reporting could be addressed with the alternative approach of weight-of-evidence reporting which permits maintenance of journalistic objectivity and balance while providing the audience with a sense of where the truth might lie. However, in this research it was found that New Zealand journalists and media editors exhibited differing views about evaluation

and the weight-of-evidence approach and their implications for journalistic balance. This lack of clarity is likely to remain a cause for concern in environment journalism. This points to another area of research that may be considered in further developing the ‘message framing approach’ since the weight-of-evidence approach to reporting appears to provide a solution to the problem in hand without compromising journalistic objectivity and balance. Its implications and practicability also call for further research. Findings may in turn inform the development of the ‘educational approach’ and related contents of training and education programmes as it appears to offer a way for achieving improvements to news media coverage of S&E issues.

7.5.7 Specialisation in environment journalism

Although environment journalism is increasingly seen as a specialist area in journalism, it may not have yet gained significance comparable to more traditional specialisations such as sports or politics. As we have seen in Chapter 5, in New Zealand, although reporters were assigned to cover S&E issues, this appears to be one of many other areas that they cover. Sachsman *et al.* (2006) observed a similar trend among environmental reporters in the United States. Therefore, it seems the case that even when environment reporters are employed within news organisations, there appears to be a lack of full time specialisation among these reporters. This observation points to three areas of implication for the ‘educational approach’ proposed in this thesis. Firstly, the constant shifting between reporting rounds may mean that these reporters will not have the time to build on their knowledge base. As argued earlier in Section 7.5.1, for the success of the ‘educational approach’ there is a need for continuity in journalists’ knowledge building in order for them to keep up with the progress of S&E issues. Secondly, the lack of specialisation in environment journalism raises questions about the selection of candidates for mid-career training programmes, and thirdly, it raises questions about how the contents of such programmes are to be constructed. It becomes subject to debate if training should be provided for reporters covering the environment round, to enable them to master how S&E issues are linked to other aspects such as business, politics, development, and foreign affairs, or if training should be provided for all reporters (regardless of their specialisation), so that they are better equipped to identify the S&E aspects within a broad range of news topics.

On the other hand, the fact that environment reporters cover other topics in addition to S&E issues may mean that they would be better able to see S&E aspects in other areas. Additional research appears necessary to address the question of whether specialisation in environment reporting is an advantage for the propagation of S&E news. Such research would be especially important considering the conflicting perspectives in the literature about the advantages and disadvantages of journalistic specialisation in this area. Pointing out the advantages, some have argued that specialisation in environment journalism may lead to a deeper coverage of related issues as it gives the journalist a solid sense of purpose (Tucker 1992), allows the development of substantial

understanding of the subject area and the establishment of contacts with experts in the field (Sachsman *et al.* 1988). In addition, the presence of an environmental reporter provides a point person responsible for the coverage of related news and he or she might play a role in pushing editors to give priority to certain stories (Rubin and Sachs 1973). On the other hand, others have argued that specialisation may lead to biases – the inclination to build friendships with and adopt the views of information sources, and the reporting of certain perspectives in a favourable manner (Ferguson and Patten 2001; Tichenor 1979). From another perspective, not compartmentalising the environment as a specialised reporting area may in fact be advantageous in that it offers a way to improve the newsgathering process by avoiding the situation where “a single reporter is solely responsible for identifying newsworthy events and sources” and relying instead on a broader base of expertise (Lacy and Coulson 2000: 23). It can also ensure that all reporters are sensitive to the environmental angle which in turn supports the perspective that in order to enhance awareness about people’s connection to nature, environment reporting should not be separated from other topics (Archibald 1999). When environmental aspects are covered by non-environment reporters they are able to provide a clearer picture of interconnected problems and help avoid the perception of environment issues “as a series of problems that are disconnected from one another and from the way we live and do business” (Keating 1997: 13).

While the question of whether or not specialisation in environment reporting would be an advantage for improving news media coverage of S&E issues would require addressing elsewhere, within the context of this study it suffices to say that this is a factor that would need to be taken into account in the implementation of the ‘educational approach.’ It is suggested that one way for addressing the problem would be for the mid-career ‘educational approach’ to target specialised environment reporters and other reporters who are largely responsible for covering related areas, and for the ‘educational approach’ implemented via tertiary journalism education to provide introductory knowledge for all journalists entering the workforce. This will thus determine how the contents of these programmes are designed and implemented.

7.5.8 Designated section for news on sustainability and the environment

Over half of New Zealand environment reporters and almost a quarter of journalists from developing countries surveyed in this research indicated that space allocation was a constraint to S&E news reporting. Space constraint is often seen an impediment to in-depth coverage of S&E issues. As Ward (2002: 42) noted: “To report news about global warming in 10 inches of copy presents daunting challenges to even the most knowledgeable and skilled environmental reporter and editing team.”

On the one hand, it may be argued that the employment of the ‘social responsibility approach’ that requires a commitment on the part of the media to provide responsible and effective coverage of

S&E issues may lead to a special section designated for their coverage. A designated environmental section, akin to the sports pages of a newspaper, would ensure the provision of the necessary space for in-depth coverage – hence addressing the space constraint problem. Such a section, closely connected to the establishment of the environment as a standard news category would ensure coverage of related news even when there is no specific demand for such news (Sandman 1974). However, on the other hand, questions about the effectiveness of having such a designated section remain unanswered. Titus Mbuya, editor of Botswana's *Mmegi* newspaper commented that a lack of a designated environmental section within a newspaper does not necessarily mean that environmental issues go uncovered as media critics and readers often assume (Mbuya 1992). Mbuya argued that since the environment has implications for almost all aspects of human life, an environmental angle may be incorporated in news stories on a range of other topics such as “health, industry, entertainment, agriculture, [and] crime” (*ibid*: 138). Therefore, this suggests the merits of incorporating S&E aspects in all news areas, rather than as a speciality area. Furthermore, an environmental section, in the case of newspapers, may attract the attention of readers already interested in the subject. Akin to the tendency of an individual uninterested in sports to skip the sports pages, the environment pages may be subject to a similar fate. Ryan (1991: 83) maintains that although the Public Broadcasting Service in the United States has been adept at producing and broadcasting programmes on a variety of environmental issues, there is a tendency for such programmes “to speak to the converted”. This means that such programmes do not reach a large portion of the audience – the “more mainstream audience, an audience that is not likely to watch an hour-long, very sophisticated discussion of the issues” (*ibid*: 83).

The allocation of a designated space for the coverage of S&E issues appears to have both advantages and disadvantages. Hence, this is another area that seems to require further research. To test the effectiveness of having a designated section, future research could comparatively analyse the effects of S&E news presented in these two forms – incorporated in various news sections and as a separate section – in terms of audience exposure, audience reception and educational impacts. Findings may be instrumental in informing decisions related to the ‘social responsibility approach’ as a method for improving news media communication of S&E issues – as it would allow for suggestions on “best practices” that the news media can take on.

In the case of measuring educational impacts of S&E news coverage, the measurement method developed for this research which uses a keyword system to quantify understanding of sustainability may be employed to test changes in depth of understanding. Its use in three of the case study in this research found it to be an effective way for generating data that was statistically measurable in terms of degree of understanding and change in understanding. Use and testing of this method in other contexts is thus recommended to further examine its reliability as a measurement instrument. This method could also be developed to measure other aspects

concerning knowledge and understanding of S&E issues. Such research appears warranted when we consider the lack of established instruments for measuring changes in understanding of sustainability following an intervention.

Research on how audiences receive mediated S&E messages is particularly important when we consider previous accounts indicating that too much news coverage may result in counterproductive effects. Although media coverage builds audiences' familiarity with environmental issues, in some cases, extensive media coverage, may eventually result in issue weariness (Hannigan 1995). For instance, Protess *et al.* (1987) observed that when environmental investigative stories focused on recurring issues they tended to have a lower impact potential on public attitudes. In addition, they noted that when information about an issue was accumulated over time, subsequent communication about that issue tended to have diminishing effects. Krönig (2002) observed that with increased environmental coverage in the German media, the environmental message became somewhat accepted by the majority of its public; however, although they accepted that long-term environmental risk was a reality they no longer believed in the necessity for urgent action. Krönig reasoned that such public reactions could be due to the lack of actual occurrence of predicted disasters or an acceptance that the problems cannot be overcome or that they were irreversible. Such paradoxical public reception resulting from enhanced environmental news coverage is of great concern, and is an area that would require deeper enquiries, considering the proposal for enhanced media coverage as a means for increasing public concern and support for ameliorating actions.

7.5.9 Mainstream media's commercial orientation

Recapping the arguments of media critics, as detailed in Chapter 2, many have criticised the mainstream media for their role in encouraging consumerism and unsustainable consumption patterns. It has also been the criticism that while a large portion of media content encourages consumerism the media does little to examine the impact of unrestricted consumerism on the environment and society. The difficulties in engaging the media as part of the solution have also been discussed. Moreover, many have questioned the capacity of the mainstream media to effectively communicate S&E issues, considering their commercial orientation. Some have contended that the media are unlikely to convey messages that may jeopardise their advertising revenue.

Somewhat contrary to earlier remarks about mainstream media reluctance to carry such content, in this study, it was observed that a majority of mainstream media managers in New Zealand expressed a willingness to discuss the negative impacts of consumerism and the use of psychology in advertising in order to promote the idea of sustainable consumption – indicating a sense of 'social responsibility'. Although some expressed concerns over the potential impact of such content

on their advertisers and corporate sponsors, many affirmed that news was independent from advertising. Evidencing such non-news media content, in early 2007, New Zealand's free-to-air television station, TV1, aired a six-part programme entitled *Why We Buy* that discussed the psychological strategies advertisers and marketers use to persuade buyers. Therefore, an assertion of this thesis is that although the mainstream media have become adept in their ability to promote 'consumerism,' this does not automatically translate to mean that the news media are incapable of playing a role in rectifying problems their organisations may have helped create. Hence in advocating the 'social responsibility approach' mainstream media unwillingness to carry messages that may counter advertiser interests should not be presumed.

Still it may be the case, as Sandman (1974: 233) suggested, that although advertiser pressure may not be "the omnipresent burden that conspiracy theorists imagine...the possibility of such pressure *is* omnipresent." Although sensitive stories do eventually get published or broadcasted, they are often preceded by much heated debate with editors – for reporters wanting to avoid such debates, leaving out advertiser-related news would appear easier than the struggle of pushing them through the newsroom hierarchy (*ibid.*). The outcome of this is similar to advertisers having a decisive influence on news (*ibid.*). Nevertheless, this study found that many journalists and media managers in New Zealand indicated that they were more likely to convey news messages linking advertising and consumerism with sustainability if this was brought to their attention as a matter of public concern, rather than if it was left to initiatives of their own. Therefore, it may be argued that if the mainstream news media are not conveying a particular issue, it may be due to a lack of sufficient expression of public concern about the issue rather than a lack of a 'social responsibility' on the part of the news media. This brings forth the role of news information sources as an important factor that can have an influence on the news production process; this will be dealt with in further detail in section 7.5.11.

Ultimately however, the mainstream media are commercial organisations that are dependent on advertising revenue for their sustenance. Durning (1998) noted that if the media's advertising revenue falls it may mean a reduction in the number of articles they can afford to cover; such reduction in turn can be a disruption to the flow of information that is necessary for a democratic society. In New Zealand, Tully (1991) observed that a decline in a news organisations' advertising revenue led to the reduction in number of journalists employed, and that this in turn led to a decline in news quality and range. To some extent, government funding could help reduce the mainstream media's dependence on advertising revenue, and hence provide the space for S&E media content in a less-commercialised environment. The public, as Durning (1998) suggested, would also need to be prepared to pay more to receive information in a less-commercialised medium. Unless such changes occur, the mainstream media's reliance on advertising would continue to be a cause for concern when it comes to S&E issues reporting.

7.5.10 Mainstream media's focus on entertainment

The entertainment centeredness of the media and their tendency towards sensationalism, as we have seen in Chapter 2, has been the subject of much criticism in the literature. In responding to a survey in the third case study of this research, many advocates and proponents of sustainability in New Zealand indicated the media's focus on entertainment to be an impediment to their coverage of S&E issues. However, it may be argued that rather than continuing with critiquing the mainstream media for their focus on entertainment and sensationalism, a more constructive approach would be a move towards education through entertainment. This is especially important considering mainstream media openness to include educational aspects in non-news content as was observed in the third case of this research. In addition to tapping from this willingness expressed by the mainstream media via the 'social responsibility approach' there is also a possibility for the application of the 'message framing approach' proposed in this study to media entertainment content. Such an approach, although not termed as such, is already being explored. For instance, recognising the strong influence that the entertainment media can have on attitude and behaviour, the *Population Media Center*¹⁰² is aiming to establish collaboration with the mass media to incorporate educative messages within entertainment programmes such as dramas and soap operas to promote sustainable population numbers and the reduction of human environmental impacts (Population Media Center 2005). In their environmental guide for the screen production industry in New Zealand, Smith and McConachy (2005: 25) suggested the inclusion of environmental messages in their products; for instance, by portraying "a character placing a drink can in a recycling bin [or through] a storyline with an environmental message." Because of the story telling function of television in society and because "the story is a powerful sociali[s]ing agent" Shanahan (1996: 191) asserted that how environmental issues are portrayed within entertainment media content needs to be carefully considered. This further adds to the value of the 'message framing approach.' The development of a comprehensive set of message framing strategies, as suggested in Section 7.4, may be instrumental to producers of entertainment programmes in incorporating effective educative content that can serve to enhance public understanding and awareness of S&E issues. The impact of such programmes on audiences' knowledge, views and behaviour is also another area that appears to warrant further study considering observations that have shown the limitations of this approach in media-saturated countries (Sherry 2002).

7.5.11 News information sources

In the surveys of journalists in the first and third case of this research it was observed that certain groups, namely, the public; environmental and social-interest organisations; government officials; university representatives; and, prominent personalities were cited as frequently used information

¹⁰² For further details about projects and countries in which the PMC operates, see www.populationmedia.org

sources suggesting that these groups are key stakeholders that have a particular role to play in the S&E news production process. In what follows the specific role of these groups in facilitating mediated communication of S&E issues is discussed in further detail.

i. The public

In the third case study of this research it was observed that many newsmen in New Zealand indicated 'public demand' for S&E news as a factor that could lead to an increase in their organisation's coverage. In addition, when it concerns the coverage of contentious issues such as the social impacts of advertising and consumerism, many indicated that they would cover it if it was brought up as a public issue. It may thus be argued that public demand and interest is a prominent factor that determines media judgement of newsworthiness of an issue. There is a tendency for the news media to provide regular coverage only to stories that are perceived to be salient and pertinent to peoples' lives (Dennis 1991). This means that for increases to news media coverage of environmental issues there first needs to be considerable evidence of public concern (Sandman 1974). Therefore, the responsibility of bringing forth S&E issues to the public realm, to some degree, falls back on the public. Improvements to quality in media coverage of these issues would also require a public demand for such quality. One way of doing this would be through letters to the editor as such letters provide the news media a way to gauge the importance of environmental issues to the public (Hessing 2003). In the case of broadcast media, phone calls to duty officers is one way for conveying messages about what matters to the member of the public (Howson and Cleasby 1996). New Zealand broadcasters also welcome audience responses through "feedback logs" and "message boards" on their websites, offering another arena for the public to express their views and demands. Through organised community groups, or as individuals, the public could initiate discussions and debates concerning S&E issues through these arenas provided by the mainstream media.

The above case study also found that audiences' preferences for entertainment programmes such as soap operas, as evidenced in audience ratings, which run parallel in time with current affairs programmes that do provide a deeper coverage of S&E issues was a cause for concern for one media manager. Hence, it may also be argued that public demand for S&E coverage would need to be clearly evident in audience ratings and subscription figures for the mainstream news media to justify such coverage, as for the media it would make little sense to keep covering an area that the public clearly has no interest in. As Dunwoody and Peters (1992: 224) have stressed moral incentives may not suffice to encourage the news media to improve the quality of their environment reporting as this would require additional resources in the form of a journalist's time and competence as well as financial resources for in-depth investigative reporting. Such coverage would need to prove profitable for the media organisation, i.e. the

media would need to see “a direct link between quality of coverage and number of subscriptions” (*ibid*: 224).

In summary, members of the public may contribute to improvements in media coverage of S&E issues by providing feedback to the media about their expectations, by initiating and responding to debates, and by indicating their interests as viewers and through subscriptions.

ii. Environmental and social-interest organisations

Environmental journalists surveyed in this research, both from New Zealand and developing countries alike, indicated environmental interest groups to be the most frequently used information source. In addition, this study observed that a majority of New Zealand media managers and reporters believed pressure from environmental and social interest groups to be a factor that could increase coverage of sustainability issues. This stresses that these groups have a particularly significant role to play as information sources. Therefore there is a need for these groups to vigorously communicate their inputs to the news media “to ensure that their messages have a rightful share and that what is transmitted is accurate” (Smyth 1990: 223). However, as Voisey and Church (2000) pointed out, environmental groups sometimes contribute to the lack of quality news reports on sustainability – although advocates are well aware of the broad nature of sustainability issues, they tend to centre their media approach on only environmental aspects because of a belief that it would be difficult to gain media coverage for multifaceted issues. “This is negative reinforcement: if it is not news, then it does not get coverage, and if it is not being covered, then clearly it is not news” (*ibid*: 199). Moreover, advocates rarely spend time “developing stories that sell the broader message of sustainability”; therefore, news reporters do not receive adequate information from their key sources which might help them frame their stories with a strong sustainability angle (*ibid*: 199).

There also appears to be a mutual distrust between environmental NGOs and the mainstream media. Some environmental groups, for example, are cautious in their approach in dealing with the media. The author’s own work experience with the World Wide Fund for Nature (WWF) in Malaysia, found that the organisation had internal policies that required staff to be careful in their dealings with the media. As the work of WWF in Malaysia is largely dependent on good working relationships with the country’s local and national Governments, WWF avoids overt public criticisms of the Government. The media that thrives on controversy and conflict to make news is therefore seen as a potential threat to this relationship. Staff of WWF are discouraged from giving on-the-spot interviews with journalists. Instead the organisation prefers the use of carefully written press releases. Farrow (2000: 191) provided a similar perspective:

There has...been a long history of distrust of the media within NGOs. Policy officers are always looking for access to government departments and policy makers, and are anxious that a

wrong headline or quote could misrepresent their case and result in closed doors. There has been – and still is – an inability to see that the specialist journalists are on the same side and look to the NGOs to say the kinds of things they can't.

Almost reciprocally, many in the press, as Dennis (1991: 62) observes are “very suspicious of environmental spokespersons.” Journalists feel that while environmentalists “speak in platitudes that are hard to dispute or disagree with, their real interests and passions are not always up-front” (*ibid*: 62). In the first case study of this research it was observed that some journalists from developed countries expressed the view that environmentalists had a tendency to exaggerate, and are at times biased, manipulative, idealistic, or unrealistic. In addition, as Dennis (1991: 62) noted, environmentalists sometimes have “a quasi-religious zeal about their passions and are impatient with the more measured approach” of the news reporter. The “structural and professional conservatism of the media maddens...[environmentalists] who cannot understand anyone who does not regard saving the Earth as the most compelling priority in the world today” (*ibid*: 60).

It is perhaps the case that there is a lack of understanding between these two groups. Environmental and social-interest organisations that lack an understanding of news value determinants and the various constraints of the media are likely to be frustrated with the manner in which the media cover S&E issues. Environmental organisations need to understand that for the media the environment is simply one of numerous issues that may be worthy of coverage (Dennis 1991). On the other hand, the media may lack an understanding of the urgency that environmental advocates see. Therefore, there is a need for environmental groups to learn the intricacies of a news organisation's operations, and as we have already established, knowledge building of journalists through the ‘educational approach’ could enhance their understanding of the urgency of S&E issues.

iii. Government officials

Government officials were the second most frequently cited information source for both groups of journalists surveyed in the first and third studies of this research. This stresses the particular responsibility these individuals hold for improving media communication of S&E issues. Officials in charge of S&E matters would need to be proactive in informing the media of developments and initiatives. As Smith (2000b) points out, political debates concerning environmental issues need to be undertaken within a more open arena as this would in turn encourage news media coverage of the issues. Furthermore government officials may also communicate S&E matters via the media in a manner that invites public feedback and debate. However, such openness may be somewhat difficult to achieve in developing countries where governments adhere to a rather closed system of operation. Some journalists from developing countries surveyed in this study, for instance, indicated difficulty in obtaining official

information from government sources. Such constraints are likely to impede improvements to news media coverage of S&E issues.

iv. University representatives

The survey of environment journalists from developing countries in the first case study, as reported in Chapter 3, found that many of them tended to have a positive view of university representatives as an information source. University sources were perceived to be well-informed, reliable, and unbiased. As detailed in Chapter 5, the third case study noted that many environment journalists in New Zealand as well indicated that they ‘sometimes’ engaged university researchers and academics as information sources. Hence, university representatives, especially scientists involved in research on S&E issues, have a significant role in improving news media communication of related issues. However, scientists may be particularly problematic as information sources (Allen 2001; Witt 1973). They tend to have insular perspectives of their areas of specialisation and are inclined to use communication forms that are incomprehensible and inaccessible to the lay public (Witt 1973). What is more is that scientists tend to be sceptical of the news media and are sometimes reluctant to communicate with reporters (Farrow 2000).

Hence, it may be argued that to facilitate the news production process, scientists need to use audience appropriate language when communicating scientific information to the news media (May and Pitts 2000; Smith 2000b). In some cases scientific inquiries are exploratory – scientists need to make this clear so that it can be made clear to the public in turn by the media (*ibid.*). Scientists need to “have some understanding of what drives the media – for example, the tendency to want to reduce the number of shades of grey in the full scientific argument or to focus on just one newsworthy aspect of an issue” (May and Pitts 2000: 19). Providing a news media perspective, Allen (2001) stressed the need for scientists to establish better relations with the news media, for the purpose of communicating environmental issues. There is a need for scientists to understand newsroom culture – unlike the nature of scientific enquiry which requires detail and precision and is often conducted over extensive timescale news reporting requires the simplification of information in lay language under the pressure of highly demanding deadlines (*ibid.*). Therefore, here again there appears to be a need for understanding between two different parties – scientists and the news media. While the building of journalists’ knowledge on the scientific and technical aspects of S&E issues could increase their understanding about the nature of scientific enquiry, there is a need for scientists to acquaint themselves with the ways of the media.

v. Prominent personalities

In the third case study of this research, it was found that over a quarter of the journalists and half of the media managers surveyed indicated that they would attribute a high level of newsworthiness to an issue if there was a celebrity or prominent personality associated with it. It may thus be argued that prominent personalities are capable of playing a significant role in determining media coverage of S&E issues not only as information sources but also as agenda-setters. In their review of the agenda-setting hypothesis, Rubin and Haridakis (2001) noted that powerful sources such as presidential figures can have an influence on the media's focus on issues. In the United States prominent personalities such as President Nixon have played a role in pushing the environment as an urgent and newsworthy issue (Maloney and Slovonsky 1971; Sandman 1974). In the UK, media coverage of environmental issues soared following two speeches by, then Prime Minister, Margaret Thatcher, in which she expressed her concerns about environmental problems (Gaber 2000). At the time of the writing of this thesis an increase in news media coverage of climate change was observed in New Zealand. Although the exact reasons for this proliferation cannot be ascertained here, one speculated reason is the release of the documentary, *An Inconvenient Truth*, presented by former US vice president, Al Gore, followed by his visit to New Zealand on 14 November 2006. *The Alternatives Journal* (2006: 8) highlighted that the year 2006 "marked a new rise in concern about the global impacts of climate change, prompted, no doubt, by the release of...[the] documentary *An Inconvenient Truth*." Therefore, through a variety of ways, prominent personalities are capable of indirectly enhancing media coverage of S&E issues by increasing the prominence of these issues in the news agenda.

As we have seen above, one contribution that sustainability stakeholders can make towards improvements to mediated communication of S&E issues is through their role as information sources. It may be useful to establish formal channels for exchange of information between journalists and news sources. An example of the positive benefits of such a channel is the initiative undertaken by the *Media Enviro-Forum* in Zambia. Musukuma (2002) reported that the *Media Enviro-Forum*, established by a team of Zambian journalists, has since its inception organised workshops on media-environment topics and monthly meetings between journalists, policy makers and environmental specialists that facilitate exchange of information on environmental issues. The news media's enhanced information base and interaction with stakeholders resulted in increased environmental reporting (*ibid.*).

In summary, it may be argued that information sources are key stakeholders that have an important role to play in bringing about improvements to news media coverage of S&E issues. By realising media needs, understanding journalistic norms, and appreciating constraints within which

journalists operate, news sources may supply journalists with critical information and facilitate their understanding of intricate issues.

7.6 Synthesis

In brief, this research built on an identified need for improvement to news media communication of sustainability and the environmental. Such improvement was regarded necessary for the purpose of enhancing public understanding of sustainability and environmental problems and thus their support towards ameliorating actions and initiatives. Three broad approaches to improvement were explored. Firstly, it was proposed that communication of these issues in the mainstream media could be improved through the ‘educational approach’ of providing related training and education for journalists and journalism students. Secondly, it was posited that improvements could be achieved through a ‘social responsibility approach’ since a degree of mainstream media receptiveness towards a more responsible role in communicating these issues would be necessary for improvements to their coverage. Finally, a ‘message framing approach’ of strategically framed information campaigns implemented via alternative media channels was regarded to be necessary considering the limitations in the news production process of the mainstream media. Four distinct case studies were developed to explore these approaches. Employing a range of evaluation methods, the potentials of the above approaches were tested.

Based on the key findings of the four cases studies and a broader analysis of the other interconnected factors that can have an effect on the viability of the three examined approaches to improvement, five key conclusions were derived:

- i. Considering its largely positive effects, that this research found, it is argued that the ‘educational approach’ of building journalists knowledge through education and training is imperative for improvements to mainstream news media communication of S&E issues. Such training and education can have an impact on journalists’ knowledge and understanding of the nature of these issues; their perception of the importance of these issues; their reporting skills; and, their interest in reporting, which in turn has the potential to contribute to improvements in their news reporting. This thesis hence stresses the need for the organisation of more mid-career training programmes in environment reporting and the need for more journalism schools to provide distinct courses on S&E topics within their curriculum.
- ii. In advocating the ‘social responsibility approach’, that mainstream media would lack receptiveness towards such a responsibility should not be assumed. Although mainstream media organisations may tend to be unreceptive to editorial policies on reporting S&E issues, these organisations are often receptive towards a role in providing educative information especially in non-news media content. However, ‘educative’ news reporting and substantial

improvements to news media coverage of S&E issues may be expected only when there is a higher degree of receptiveness among the mainstream media towards a social responsibility in this area. To foster such a degree of receptiveness the 'social responsibility approach' would need to be clear in terms of how it might benefit the media organisation; for instance, through improvements to transparency or the possibility of government funding. In addition, it would also need to be clearly evident to the media that their embracement of such social responsibility can be made publicly explicit without threat to their autonomy.

- iii. There is a need for further development of the 'message framing approach' considering its potentials to contribute to public understanding and views through information campaigns as was observed in this research. This approach may be further refined by taking into account other fields of studies on effective communication and other areas that are known to have an influence on human behaviour. Furthermore, there appears to be a need for 'message framing' strategies to address other problems related to news framing such as the restrictions brought on by traditional news value determinants and by the journalistic norms of objectivity and balance. A more comprehensive set of 'message framing' strategies in turn may be employed in the 'educational approach' of building journalists' knowledge and skills, and in developing effective non-news educative media content.
- iv. A broad-spectrum approach of improving mediated communication of S&E issues for the purpose of enhancing public understanding and awareness would require a wider engagement of alternative media channels, which as this study shows, provides the space and flexibility for conveying strategically framed messages – hence, they provide a communication arena that can compensate for some of the limitations of the mainstream media.
- v. Improvements to news media communication of S&E issues are likely to be less substantial if the three individual 'approaches to improvement' were implemented in isolation of each other. The essence to achieving improvement is rather an integration of these approaches and the other determining factors. Therefore, in order to address the aforementioned problem of news media communication of S&E issues, it is essential to have a clear view of the interconnected and interdependent causal chain of events that can have an effect on the news production process and to take the necessary steps to facilitate the determining linkages. Furthermore, achieving improvements to mediated communication of S&E issues would require the cooperative action of the various stakeholders involved, including governments, interest groups, academics, educational institutions, scientists, and the public. In addition to the various roles these stakeholder groups play in advancing the approaches to improvement proposed in this thesis, they would also need to build their understanding on the operations of the news

media and the constraints of journalists, and as news information sources they may also facilitate journalists' understanding of S&E issues by providing clear and concise information.

This thesis adds to the body of literature on environmental communication by providing an exploration of three approaches to improving news media communication of S&E issues – the 'educational approach', the 'social responsibility approach,' and the 'message framing approach'. As has been acknowledged in the introduction chapter of this thesis, despite the shortcomings of mediated communication as a tool for social change it is nevertheless a crucial element in any sustainability initiative, as support towards mitigating actions and policies can be expected only from an informed public. Therefore, improvements to news media communication of S&E issues require urgent attention in research and application.

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Appendices

APPENDIX 1

Contents of the mid-career training programmes in environmental reporting organised by the Reuters Foundation and the Bellagio Forum for Sustainable Development (March 2001 – June 2004)

Writing Environmental News, Bogota, Columbia (26-30 March 2001)

Number of Participants: 10

- 1 Exercise: Indonesian Forest Fire
- 2 Exercise: GM Potatoe
- 3 Exercise: Population Growth
- 4 Exercise: Carbon credit
- 5 Exercise: Press Conference on a new invention – plastic waste sorter – should have significant impact on the economics of recycling.
- 6 Speaker: Xavier Izko from IUCN – Example of Sustainable Development put into practise, e.g. Projects in the Ecuadorean rainforest which are both sustainable and profitable, examples of both successful and unsuccessful SD projects
- 7 Speaker: Julia-Elvira Ulloa from Unilever Andian (a multinational manufacturing company that has embraced the need to raise the profile of environmental issues) – gave details on a programme to make Colombian primary school children aware of the need to conserve water.
- 8 Speaker: Max Henriquez (Colombian meteorologist, vice president of the Ntional Environmental Journalists' Association and a dedicated environmental campaigner) – offered a radical view of the world environmental problems, laying the blame firmly on current economic systems and political structures.
- 9 Speaker: Daniel Manrique of Fundepublico (Foundation for the Defence of the Public Interest) a private, non-profit organization which uses the law to protect Colombia's ecology, taking companies and authorities to court – provided a lawyer's eye-view.

Note: An economic focus was maintained while covering a wide range of environmental issues.

Writing Environmental News, Berlin, Germany (3-7 Dec 2001)

Number of Participants: 13

- 1 Introduction: Aims of the Workshop / Technical Test
- 2 Exercise: Press Conference on a new invention – An obscure device to sort plastics. Who cares? A new product is launched which claims to be able to sort out different types of plastics being recycled in a cheap and economic way. The news conference is full of dry technical jargon, but the potential implications for the growing problem of waste management are huge. Participants are encouraged to cut through the jargon and detail to get to the heart of the story, in particular by using some pithy quotes.
- 3 Speaker: DBU head Fritz Brickwedde
- 4 Exercise: Smog in Southeast Asia – Who is to Blame?
- 5 Exercise: Trees – A bold new initiative to clean the planet's atmosphere or a cop-out? - An Australian state signs an agreement with a major Japanese power company to plant forests in Australia as carbon sinks. The exercise includes proponents and opponents of the controversial idea, background on the Kyoto protocol, and a chance to grapple with the issue of global warming. Participants are encouraged to point out that the Japanese company is the country's largest nuclear utility, a factor that usually gets readers' attention.
- 6 Exercise: GM Food – A scientist goes on television to warn about a research development affecting our diet. A scientist with a respected research institute goes on TV to announce that experiments on rats fed with genetically modified potato had stunted their growth and weakened their immune system. There is background on the controversy surrounding GM foods, and a number of experts, and supermarkets, respond to the allegations. Eventually the research is condemned as flawed and

the scientist is sacked (based on a real story in Britain). Participants are encouraged to seek a balance between the potential benefits of GM foods and fears about side-effects.

- 7 Speaker: IUCN Director General – Achim Steiner
- 8 Field Trip: Visit to fuel-cell project (Berlin electricity and water supplier).
- 9 Exercise: Evanya – A collision between two ships at sea threatens more than just people.
- 10 Exercise: Mud Otter – The implications of a rare mammal's disappearance
- 11 Exercise: People – This scenario is covering the latest report by the U.N. Population Fund, which enables participants to look at arguments surrounding the issue of limiting population growth. Participants are encouraged to seek balance in their story.
- 12 Speaker: Hanns Michael Hoelz, Deutsche Bank – Sustainable Development – Commitment of a Global player.

Writing Environmental News, London (10-14 June 2002)

Number of Participants: 12

- 1 Introduction: What is Environmental News
- 2 Exercise: Smog – Forest Fires (Priorities, News values) – strong emphasis on using colourful quotes which brought home the discomfort of life under permanent smog to ordinary people.
- 3 Exercise: GM Potatoes (Who do we trust when the profit motive collides with emotion?) (Exercise led to the conclusion that the whole scientific research was fatally flawed. It provided a valuable lesson in how to row back on a story when one has been led down the wrong alley and stressed that all environmental claims need to have a solid scientific basis including peer review).
- 4 Exercise: World Population Growth (A complicated story with a number of different figures and angles provided an opportunity to demonstrate the many different approaches one can have to a story. Five different introductions to the story was handed out at the end of the exercise and sought to demonstrate that each of them was valid).
- 5 Exercise: Invention – A green business enterprise (Exercise on Invention of a plastic sorting-device offered a chance to demonstrate how to bring relevance and colour into what at first appears to be a dry scientific story, mainly by emphasising the enormous implications to the environment of a hugely more economic waste disposal system).
- 6 Exercise: Trees – A Price for Pollution – Carbon Sinks & Emissions trading – discussion on global warming, Kyoto agreement and the validity and morality of carbon trading.
- 7 Field Trip: Kew Royal Botanic Gardens – botany research, world's largest collection of plant specimens, healing and harmful properties of plants, possibilities of patenting, commercial implications of some research into medicinal properties, herbs used in traditional Chinese medicine
- 8 Speakers: Globalisation, friend or foe of the earth? Speakers from Friends of the Earth and World Trade Organisation
- 9 Exercise: Collision – News Values and how to balance them.

Preparing for the World Summit on Sustainable Development, Grahamstown, South Africa (8-12 July 2002)

Number of Participants: 14

The trainer focused on the five summit priorities – water, energy, food security, health and biodiversity – using existing exercises to back them up.

- 1 Introduction
- 2 The Summit
- 3 Exercise: Agenda
- 4 Exercise: Using the Internet
- 5 Exercise: El Nino
- 6 Speaker: Sharon Chetty, UNDP – How it works
- 7 Exercise: Global Warming – Kyoto Accords
- 8 Exercise: Trees – Carbon credits
- 9 Speaker: Peter Rose, Professor of Biotechnology at Rhodes, spoke on Water – A key issue
- 10 Field trip: Visit to Albany Working for Water Project outside Grahamstown and a writing exercise on the project
- 11 Exercise: Water story

- 12 Videoconference: The role of the WTO – An official from the Department of the Environment in Johannesburg came down to talk about the organisation of the summit and we held a videoconference with an official of the World Trade Organisation in Geneva.
- 13 Exercise: Population – Ever upward exercise
- 14 Speaker: Dr Phil Heemstra – Biodiversity in the Oceans (Marine Biodiversity)
- 15 Speaker: DG Dept of Environmental Affairs – What it means to South Africa
- 16 Exercise: Rice genome
- 17 Exercise: Copy Review

Note: Following suggestions from previous workshops, the trainer introduced a one-to-one session with each of the participants, in which the trainer offered suggestions for improvement.

Writing Environmental News, Durban, South Africa (13-18 Sept 2003)

Number of Participants: 12

- 1 Introduction: Aims of the course – technical test
- 2 Exercise: GM Food – Potatoe
- 3 Exercise: Invention – how to look beyond technical jargon for the real story
- 4 Field Trip and writing of report on the trip for possible filing to their news organization
- 5 Panel discussion on how tourism and mining impacts on protected areas
- 6 Discussion on how to handle a report on panel talks and write reports
- 7 Discussion: Broad-view report on congresses, with a more “featurish”, analytical approach, looking at fundamental issues and achievements.

Telling the Story: A Media Workshop at the Delhi Summit on Sustainable Development, New Delhi, India (2-6 Feb 2004)

Number of Participants: 13

- 1 Introduction of participants
- 2 Speaker: Dr Leena Srivastava, Executive Director TERI – briefed the group on the conference agenda to allow a discussion of what stories should be covered.
- 3 Writing exercise: The UN Secretary General’s report / speech on Agenda 21.
- 4 Speaker: Mr Marcel Engel, Director of WBCSD Regional Network on Business and Sustainable Development – talked about business and sustainable development
- 5 Speaker: Ambassador S Dasgupta, Distinguished Fellow, TERI – talked on Climate Change
- 6 Writing Exercise: A start to Carbon trading
- 7 Speaker :Mr S K Pandey of TERI a Member of the Task Force on Interlinking of Rivers – talked on Water problems in India
- 8 Group analysis of the issues involved in linking rivers in India.
- 9 Review and Writing Tips
- 10 Discussion: The Cauvery dispute – grasping issues
- 11 Writing Exercise: Cauvery – a way forward
- 12 Writing Exercise: Asian smog

Note: The journalists covered sessions of the summit ranging from water and sanitation to energy and food security and wrote at least one story a day. They also covered press conferences by Dr Jan Pronk, special envoy to the UN Secretary General and Borge Brende, the Norwegian Environment Minister and Chairman of the UN Commission on Sustainable Development. The summit allowed the journalists to take part in mentored coverage, extend their knowledge of sustainable development issues and build contacts in the field.

Media Briefing and Training Workshop on Environment and Health for Leading CEE Journalists – at the Fourth Environment and Health Ministerial Conference in Budapest, Budapest, Hungary (20-21 June 2004)
Number of Participants: 15

Course Contents:

- 1 Introduction of Participants – Icebreaker.
- 2 The working process and the ground rules – purpose and goal of the training workshop. Overview of the programme for the week and the expected outcomes.
- 3 Introduction of the Reuters training, explanation of the methods and working process. Aims and challenges of covering conferences.
- 4 Exercise: The Secretary General's Agenda 21 report.
- 5 Millennium goals – Questions and discussion.
- 6 Exercise: Aids HAART – Explaining medicine to the reader.
- 7 Exercise: Rice Genome
- 8 Good writing
- 9 Sources and Balance
- 10 Interview Techniques
- 11 Environment and Health: techniques of covering
- 12 A briefing on the ministerial conference topics: Linking environment and health on the media pages session. What would help journalists do their job better? The Speakers – Franklin Apfel, the former communications director of the WHO, discussed what to look out for in press conferences at the Ministerial meeting. Pavel Antonov of the REC led a discussion on what the journalists wanted to get out of the meeting.

Note: The two day intensive environmental and news training workshop was followed by mentored coverage of the fourth Ministerial Conference on Environment and Health and a "Healthy Planet Forum" run by NGOs alongside the meeting. The journalists received daily briefings from the media staff of the World Health Organisation. The journalists covered stories ranging from air pollution and the growing use of plastic as a combustion fuel to extreme weather episodes and mobile phones and the launch of REC's Green Horizon magazine. There were several press conferences a day given by scientists and ministers. The journalists were able to research and improve their network of contacts and receive feedback on their coverage. All participants published at least one article in the media during and after the training. The REC collected the published materials on environment and health and the ministerial conference.

APPENDIX 2

Questionnaire for participants of the mid-career training in environmental reporting organised by the Reuters Foundation and the Bellagio Forum for Sustainable Development

PART 1

- 1 Which type of mass media organisation do you work with?

<input type="checkbox"/> TV	<input type="checkbox"/> Magazine
<input type="checkbox"/> Newspaper	<input type="checkbox"/> Internet
<input type="checkbox"/> Radio	<input type="checkbox"/> Other.....
- 2 Who owns the media organisation that you work with?

<input type="checkbox"/> Government	<input type="checkbox"/> Independent [e.g. Indy Media]
<input type="checkbox"/> Private Business	<input type="checkbox"/> Other.....
<input type="checkbox"/> Community	
- 3 What are the main languages used by your media organisation?
- 4 What is the coverage area of your media organisation?

<input type="checkbox"/> Provincial/State	<input type="checkbox"/> Global [e.g. CNN]
<input type="checkbox"/> National	<input type="checkbox"/> Other.....
<input type="checkbox"/> Regional [e.g. Asia Media]	
- 5 What is the estimated circulation / readership / audience size of your media organisation?

PART 2

- 1 You are ☐ Female ☐ Male
- 2 What is your job title?
- 3 What is your area of specialisation?
- 4 Is English your first language? ☐ Yes ☐ No
If no, how would you regard your level of English? ☐ Excellent ☐ Average ☐ Poor
- 5 What is your highest educational qualification? If you have a degree, please state which field?
- 6 How many years of experience do you have as a journalist?
- 7 Have you undergone any other training in environmental reporting during this period besides the Reuters-BFSD training programme? Please specify the training and year obtained.

PART 3

- 1 When you first became a journalist, what area did you want to specialise in? Why did this area interest you?
- 2 When did you first become interested in environmental reporting? Why?
- 3 What made you decide to attend the Reuters – BFSD training programme?
- 4 Did you volunteer to participate in the Reuters-BFSD training programme? ☐ Yes ☐ No
- 5 Were you requested by your supervisor to participate? ☐ Yes ☐ No
- 6 Did the location of the Reuters-BFSD training programme and an opportunity to travel motivate you to apply?
- 7 Did you apply for leave from your job to attend the Reuters-BFSD training programme?
- 8 Was it paid leave or unpaid leave? ☐ Paid ☐ Unpaid

PART 4

PART 4.1

- 1 What key messages about environmental reporting did you gained from the Reuters-BFSD training programme?
- 2 What did you understand to be the objectives of the Reuters-BFSD training programme?
- 3 Did the objectives of the Reuters-BFSD training programme meet your training needs?

PART 4.2

- 1 Please evaluate the effectiveness of the various components of the Reuters-BFSD training programme in terms of (i) what you learned, (ii) how you were able to apply what you learned to your job and (iii) if the application of what you learned made any difference to your organisation, by grading it as poor, average or excellent. Please add any additional components that may have been overlooked in the space provided at the end of the table below.

Contents of the Reuters-BFSD Training Programme	(i) To what extent did you learn and gain knowledge			(ii) To what extent were you able to apply what you learned to your job			(iii) To what extent did the application of what you learned, make a difference to your organisation		
	Poor	Average	Excellent	Poor	Average	Excellent	Poor	Average	Excellent
Topics covered in exercises									
Topics covered by speakers									
Field trips									
Research skills									
Writing exercise									
Reporting techniques									
Mentored coverage of conference									
Press / video conference									

PART 4.3

- 1 What is your opinion about the term 'sustainable development'? (Select more than one if applicable).

☐ Complex

☐ Simple

☐ Lacking definition

☐ Clearly defined

☐ Confusing

☐ Clear and easy to understand

☐ Other.....

- 9 How did Reuters-BFSD training programme impact on your overall knowledge of environmental issues?

PART 4.4

- 1 How would you rate your frequency of environmental reporting before and after undergoing the Reuters-BFSD training programme?
- ☐ Has remained the same at an average of.....articles per month
- ☐ Has increased from an average of.....articles per month to.....articles per month
- ☐ Has decreased from an average of.....articles per month to.....articles per month
- 2 Has the Reuters-BFSD training programme contributed to this change in frequency? How?
- 3 What other factors may have contributed to this change in frequency?

PART 4.5

- 1 What environmental stories have you covered before attending the Reuters-BFSD training programme? Please provide a few titles of stories, events or issues you have covered.
- 2 How do you rate your ability to report environmental and sustainable development issues after attending the Reuters-BFSD training programme?
- 3 Please provide a few titles of stories, events or issues you have covered recently, after attending the Reuters-BFSD training programme? How do these differ in comparison to the stories indicated in question 1 above?
- 4 Have you applied any techniques or approaches you learned from the Reuters-BFSD training programme to your work? Please provide an example of what you learned and how this was applied to your work.
- 5 Did changes in your environmental reporting as a result of the training programme, impact your organisation? How?
- 6 What other factors have contributed to your abilities in reporting environmental and sustainable development issues, besides the Reuters-BFSD training programme?

PART 4.6

- 1 Describe how you source information for reporting an environmental or sustainable development issue?
- 2 Which of the following information sources do you mainly use? Please explain how you evaluate these information sources?
- | | |
|--|---|
| <input type="checkbox"/> University | <input type="checkbox"/> Environmental groups |
| <input type="checkbox"/> Government official | <input type="checkbox"/> Business |
| <input type="checkbox"/> Politician | <input type="checkbox"/> Other..... |
- 3 How has the Reuters-BFSD training programme impacted on how you source and evaluate information? Describe any changes in your process of information sourcing and evaluation.
- 4 What other factors may have contributed to such changes indicated in question 3 above.

PART 4.7

- 1 In your opinion what is the role of an environmental reporter?
- 2 What is your stand in the objectivity vs. *subjectivity* debate in environmental reporting, i.e. traditional journalism vs. *advocacy journalism*? In your opinion should environmental journalists play the role of an advocate in mobilising action in addressing environmental issues or should they strictly adhere to the rules of objectivity in traditional journalism?
- 3 What is your view about the suggestion of a new approach to environmental journalism referred to as “*sustainable journalism*” that takes the best aspects of traditional journalism (diligent research, precise language, and fair reporting) while at the same time educating people in a balanced way and supporting dialogue between people to find solutions to complex environmental problems?

PART 4.8

- 1 The following, are various styles of journalism. Which of these statements best describe the style of environmental reporting taught in the Reuters-BFSD training programme. (Select more than one if applicable).

<input type="checkbox"/> Fact based reporting	<input type="checkbox"/> Unbiased reporting
<input type="checkbox"/> Investigative reporting	<input type="checkbox"/> Public journalism / civic journalism
<input type="checkbox"/> Research oriented	<input type="checkbox"/> Advocacy journalism
<input type="checkbox"/> Emphasis on objectivity	<input type="checkbox"/> Other.....
- 2 What is your opinion about the effectiveness of this style of environmental reporting, in the context of your country and the media organisation that you work for? Please explain in terms of cultural, social and political situation of your country and organisation.
- 3 When reporting an environmental issue, what aspects do you cover?

<input type="checkbox"/> The environmental problem	<input type="checkbox"/> How problems can be avoided in future
<input type="checkbox"/> The underlying causes of the problem	<input type="checkbox"/> Other.....
<input type="checkbox"/> Possible solutions	
- 4 How have the aspects you cover indicated in question 3 above changed over the years? What factors have contributed to this change?

PART 4.9

- 1 Did the Reuters-BFSD training programme include tips on how to influence your editors and supervisors to enhance reporting of environmental and sustainable development issues? What were these tips?
- 2 Did the Reuters-BFSD training programme provide an opportunity to brainstorm the problems journalists face in environmental reporting and develop strategies to overcome these problems? What were these strategies?

PART 4.10

- 1 How would you rate the interaction you had with the trainers of the Reuters-BFSD training programme? Please provide an estimated percentage for each that you select.

<input type="checkbox"/> restricted to classroom interaction only....%
<input type="checkbox"/> one-on-one interactions....%
<input type="checkbox"/> social interactions....%
<input type="checkbox"/> other....%
- 2 Which of the above types of interaction did you find most effective in the Reuters-BFSD training programme?

PART 4.11

- 1 Please comment on the effectiveness of the Reuters-BFSD training programme in terms of the programme duration and number of hours.
- 2 Please comment on the effectiveness of the Reuters-BFSD training programme in terms of the medium of instruction (language).

PART 4.12

- 1 What would you suggest for improvement to a future training program on environmental reporting?
- 2 In your opinion who else in your organisation should attend training programmes in environmental reporting?

PART 5

- 1 When you returned to work, was your supervisor interested in feedback about the Reuters-BFSD training programme?
- 2 Did your supervisor ask you to provide a presentation or a report to share your experiences from the Reuters-BFSD training programme with others in your organisation?

- 3 Did your supervisor ask you to provide training for your colleagues, to impart the knowledge you had gained from the Reuters-BFSD training programme? Please elaborate.
- 4 After you had attended the Reuters-BFSD training programme, did any of your colleagues come to you for advice or tips on how to write about environmental issues?
- 5 Were you able to publish any of the articles you produced during the Reuters-BFSD training programme? Provide details of any that you published.

PART 6

- 1 After undergoing the Reuters-BFSD training programme, did you face any problems in attempting the approach of environmental reporting you had learned? What were the problems?
- 2 Did you find solutions to overcome these problems?
- 3 What obstacles to environmental reporting have you observed in your organisation? (Select more than one if applicable).

<input type="checkbox"/> Newsroom conservatism	<input type="checkbox"/> Lack of resources for research
<input type="checkbox"/> Event driven reporting	<input type="checkbox"/> Lack of time
<input type="checkbox"/> Priority for sensational news	<input type="checkbox"/> Limited space / airtime allocated
<input type="checkbox"/> Focus on entertainment	<input type="checkbox"/> Editors' lack of interest
<input type="checkbox"/> Government control	<input type="checkbox"/> Others _____
<input type="checkbox"/> Pressure to gain revenue	
- 4 In your view what needs to be done to overcome the obstacles indicated in question 3 above?
- 5 Have you been able to influence your supervisors / editors to publish environmental stories?
- 6 Based on your experiences, what is the best way to convince editors or decision makers to increase and improve environmental news coverage?
- 7 What changes need to be made in terms of media-related policy in order to get more environmental news into the media?

PART 7

PART 7.1

- 1 Did the Reuters-BFSD training programme motivate you to take on environmental reporting as your area of specialisation?
- 2 What other factors have motivated you to take on environmental reporting as your area of specialisation?
- 3 After undergoing the Reuters-BFSD training programme, have you influenced anyone else in your organisation to do more environmental reporting? How did you do this?
- 4 Did you share the course materials you obtained from the Reuters – BFSD training programme with your colleagues? How did they respond?

PART 7.2

- 1 Did the Reuters-BFSD training programme change your personal view on environmental and sustainable development issues? How?
- 2 What other factors have contributed to changes in your personal view on environmental and sustainable development issues?
- 3 Did the Reuters-BFSD training programme motivate you to make personal behavioural changes for environmental reasons? If yes, what personal behaviour did you change and why?
- 4 What other factors have motivated you to make personal behavioural changes for environmental reasons?

PART 7.3

- 1 How satisfied are you with your work in environmental reporting?
- 2 Has the Reuters-BFSD training programme impacted on your level of job satisfaction? How?
- 3 What other factors impact on your level of job satisfaction?

PART 7.4

- 1 Besides skills in environmental reporting, what else did you gain from the Reuters-BFSD training programme?
- 2 Were there any unintended impacts (positive or negative) that the Reuters-BFSD training programme had on you?
- 3 Did you unexpectedly discover anything about yourself or about your skills?
- 4 Did you learn anything from the other journalists who attended the Reuters-BFSD training programme? What did you learn?
- 5 Have you kept in contact with the other journalists that you met at the Reuters-BFSD training programme? Has such contact helped you in any way?
- 6 Have you kept in touch with the trainers of the Reuters-BFSD training programme? Has such contact helped you in any way?
- 7 What is the most important / biggest impact that the Reuters-BFSD training programme had on you?

This questionnaire has been designed to cover all possible areas of enquires to achieve its intended objectives; however, it is possible that some areas may have been overlooked. Please add any further comments that you feel can contribute to the aims of this research.

APPENDIX 3

Questionnaire for employers of the participants of the mid-career training in environmental reporting organised by the Reuters Foundation and the Bellagio Forum for Sustainable Development

Participant Name:.....

- 1 How long have you been a supervisor to the above participant?
- 2 Why did your organisation decide to send the above participant to the Reuters-BFSD training programme?
- 3 Did the Reuters-BFSD training programme meet the training needs of your organisation?
- 4 In your opinion, is the style of environmental reporting taught in the Reuters-BFSD training programme suitable in terms of the cultural, social and political situation in your media organisation and in your country?
- 5 Do you see the need to send more staff on such training programmes in environmental reporting?
- 6 Should environmental journalists play the role of an advocate in mobilising action in addressing environmental issues or should they strictly adhere to the rules of objectivity in traditional journalism?
- 7 What is your view about the suggestion of a new approach to environmental journalism referred to as “*sustainable journalism*” that takes the best aspects of traditional journalism (diligent research, precise language, and fair reporting) while at the same time educating people in a balanced way and supporting dialogue between people to find solutions to complex environmental problems?
- 8 Had you observed the above participant to be keen on environmental reporting prior to attending the Reuters-BFSD training programme?
- 9 Had you observed any changes in the above participant’s enthusiasm for environmental reporting since attending the Reuters-BFSD training programme?
- 10 What are the other factors that may have contributed to his/her enthusiasm for environmental reporting?
- 11 Has the Reuters-BFSD training made an observable impact on the above participant’s environmental reporting skills?
- 12 What are the other factors that may have contributed to his/her environmental reporting skills?
- 13 Has the Reuters-BFSD training made an observable impact on the above participant’s research skills?
- 14 What are the other factors that may have contributed to his/her research skills?
- 15 Has the Reuters-BFSD training made an observable impact on the above participant’s skills in information sourcing and the evaluation of information?
- 16 What are the other factors that may have contributed to his/her information sourcing and evaluation skills?
- 17 Has the Reuters-BFSD training enhanced the above participant’s knowledge and understanding of environmental and sustainable development issues?
- 18 What are the other factors that may have enhanced his/her knowledge and understanding in this area?
- 19 How would you rate the frequency of the above participant’s environmental reporting prior to and after undergoing the Reuters-BFSD training programme?
[] Has remained the same at an average of ____ articles per month
[] Has increased from an average of ____ articles per month to ____ articles per month
[] Has decreased from an average of ____ articles per month to ____ articles per month
- 20 Has the above participant had any influence / impact in the newsroom in terms of his/her sharing what he/she had learnt from the Reuters-BFSD training programme with others?
- 21 In your view what are the main issues in environmental reporting?
- 22 What are your suggestions to improve environmental reporting?

APPENDIX 4

Questionnaire for the trainers and co-trainers of the mid-career training in environmental reporting organised by the Reuters Foundation and the Bellagio Forum for Sustainable Development

PART 1

- 1 How many Reuters-BFSD training programmes on environmental reporting have you been involved in?
- 2 How has the training experience in different countries affected your understanding of environmental and sustainable development issues?
- 3 How has your acquired understanding of environmental and sustainable development issues indicated in Question 2, impacted on your training approach in environmental reporting?
- 4 What did you learn from the participants?
- 5 How has what you learned from the participants impacted your training approach in environmental reporting?
- 6 In what other areas has your involvement as a trainer in the Reuters-BFSD training programmes impacted you?
- 7 Did you observe any unintended impact that your training had on the participants?

PART 2

- 1 What was the selection criteria used to choose participants for the Reuters-BFSD training programme?
- 2 Was a needs analysis conducted prior to the design of the Reuters-BFSD training programme?
- 3 How was sustainable development defined within the Reuters-BFSD training programme?
- 4 Which of the following describes the style of environmental reporting taught in the Reuters-BFSD training programme.

<input type="checkbox"/> Fact based reporting	<input type="checkbox"/> Unbiased reporting
<input type="checkbox"/> Investigative reporting	<input type="checkbox"/> Public journalism / civic journalism
<input type="checkbox"/> Research oriented	<input type="checkbox"/> Advocacy journalism
<input type="checkbox"/> Emphasis on objectivity	<input type="checkbox"/> Others _____
- 5 How did the Reuters-BFSD training programme address cultural, social and political differences of the various countries and media organisations of the participants?
- 6 How was the principle of *objectivity* in journalism presented in the Reuters-BFSD training programme?
- 7 How was source selection and evaluation of information with respect to objectivity and believability presented in the training programme?
- 8 How was the *objectivity* vs. *subjectivity* debate in environmental reporting, i.e. traditional journalism vs. *advocacy journalism* addressed within the training programme?
- 9 Were participants encouraged to report more than just environmental problems and to also report the underlying causes of the problem, possible solutions and how such problems can be avoided in future?
- 10 Were participants encouraged to share knowledge and training materials with their co-workers when they returned home after the training?
- 11 Were participants encouraged to share knowledge and training materials with their supervisors when they returned home after the training?

- 12 Did the Reuters-BFSD training programme provide tips on how to influence editors and supervisors to enhance environmental reporting?
- 13 Did the Reuters-BFSD training programme provide an opportunity to brainstorm on the problems journalists face in environmental reporting and develop strategies to overcome these problems?
- 14 Was a network of journalists established after the Reuters-BFSD training programmes?

PART 3

- 1 How would you rate the interaction you had with the participants?
[] restricted to classroom interaction only.... %
[] one-on-one interaction....%
[] social interaction%
- 2 Which of the above types of interaction did you find most effective in the training?
- 3 To what extent have you kept in touch with the participants after the training?

PART 4

1. What problems, if any, did you face when conducting the Reuters-BFSD training programmes?
2. What are the strengths of the Reuters-BFSD training programme, which contribute to its effectiveness?
3. What are your suggestions for improvement?
4. What additional skills would you require to improve your training skills as a trainer for environmental reporters?

PART 5

1. In your view what are the main issues in environmental reporting?
2. What are your suggestions to improve environmental reporting?
3. What is your view about the suggestion for a new approach to environmental journalism referred to as "*sustainable journalism*" that takes the best aspects of traditional journalism (diligent research, precise language, and fair reporting) while at the same time educating people in a balanced way and supporting dialogue between people to find solutions to complex environmental problems?

APPENDIX 5

Contents of the module on sustainability introduced to the curriculum of the *Graduate Diploma in Journalism* programme at University of Canterbury, New Zealand in the academic year 2005

Session 1 (26 July 2005)

The first session of the sustainability module provided independent views from Helen Beaumont, a representative of the New Zealand Parliamentary Commissioner for the Environment. This session provided the Brundtland definition of sustainable development as the most frequently used, and presented the different models of sustainability that currently exist. The 'ecological model' that placed people and the economy within the limits of the environment, was noted as one with the strongest sustainability as it takes into account the ecological limits of the planet. Equity, integrated thinking and ecological bottom line were noted as the basic elements of sustainable development. Sustainable development includes people in the system and is therefore different from environmental movements of the past that tended to seclude the environment for conservation. Environmental problems associated with dairy farming, health effects related to air quality, decline in biological diversity of flora and fauna, and decline in marine life and destruction of marine ecosystems were presented as pressing environmental issues that New Zealand is faced with. Living attitudes and values were also presented as important factors impacting the environment. It was also pointed out that children had lesser contact with the environment and had little knowledge about the food system and how we depend on the environment.

Global warming was presented as a global environmental problem that had substantial scientific evidence, confirming it as an established fact. Its link with use of fossil fuel was also presented as a well established fact. Global warming can result in extreme weather conditions resulting in frequent floods, violent storms, floods and draughts and rise in sea level.

Consumption was presented as the biggest challenge. A comment was made on the increasing sophistication of the advertising industry in telling people what they 'want' and that New Zealand was part of the top 20% of developed countries that consumed 86% of the world's resources. A total of three planets would be required to live like a Kiwi. The powerful impact of advertising on children was also raised as an issue.

Individual actions however, were noted to bring small amounts of impact. A change in the economic system and more sustainable businesses are necessary.

To the question on how the media should respond to these issues, Helen expressed that presenting environmental problems as contentious issues is not a good idea. In the attempt to provide balanced reports, if two opposing views are presented equally although one is a minority view, then this cannot be considered as balanced reporting. In covering non environmental issues, journalists can look for links with environmental issues or by looking at it from a sustainability viewpoint and a long-term framework.

To a suggestion raised about having a separate section on the environment similar to sports and politics, Jim Tully suggested a better approach would be to incorporate the environmental into any story. Placing environmental stories into a particular section leads to the possibility that this section would be of interest to only some readers while it is ignored by uninterested readers. By including environmental perspectives across the various aspects and various stories covered, a wider audience can be ensured.

Session 2 (2 August 2005)

John Peet, a retired academic of University of Canterbury who also represented Sustainable Otago Christchurch, Sustainable Aotearoa New Zealand and Sustainable Engineers Forum, provided views that included both a scientific perspective as well as interest group perspectives in the second session of the module. John showed how sustainability is presented in New Zealand's Sustainable Development policies that often emphasised economic growth. Using two models of sustainability that consisted of environment, society and economy components John showed the difference between the weak sustainability model that is often proposed and the real situation in which economy takes precedence over society and environment. He pointed out the use of the term 'sustainable' in a wide variety of contexts that were in fact interrelated parts of a larger complex system, and that it was the sustainability of the larger system that was in question. John also pointed out how answers can differ to the question, what is to be sustained, depending on the discipline in which the term is defined. Within economics, the level of per capita aggregate consumption or utility is

that which is to be sustained. Within ecology it is physical throughput that should be sustained, by maintaining the functional integrity of ecosystems and ensuring that an equal amount of resources are available for future generations. He narrowed down these perspectives to conclude, "Resource transformation processes are central to the possibility of achieving sustainable development". John's presentation was followed by a series of flow models of the New Zealand economic system bringing into the picture, energy flows, raw resources, pollution, efficiency and the ecosystem. John later pointed out the limitations of GDP as a measure of growth, and showed alternative indicators that have been used in the United Kingdom (Measure of Domestic Progress) and Australia (Genuine Progress Indicator). He also pointed out the limitations of eco-efficiency and technology and the idea of decoupling economic growth from environmental damage. He concluded that a wider perspective on sustainable development that focused on the health of all of Earth's inhabitants was needed, and noted the need to examine the relationship between social wellbeing and economic growth.

Session 3 (9 August 2005)

In the third session of the module, Guy Salmon, a representative of a non governmental organisation (Ecologic Foundation) presented environmental problems as a consequence of population growth, affluence and technology. He was of the opinion that addressing affluence would require economic suppression and a long term process that is not easily achievable. He proposed technological solutions and innovations as the easiest answer to environmental problems. This would require reducing the throughput of virgin materials and fossil energy. He positively presented the idea of 'decoupling' of economic growth from environmental impacts; Therefore, continued economic growth would be possible with lesser impact on the environment. He proposed four strategies for governments to take on. One, investments in innovations in green technology; two, pricing, e.g. taxation such as carbon tax that could ensure that everyone bears the full cost that they impose on society; three, rules and four, education. Education processes however are expensive and requires a long time to accomplish and often bring only small scale results. A combination of strategies that included, rules, incentives and education are often more effective. Guy then presented the functions of the various rule-making and permit-issuing institutions in New Zealand and problems in implementation and enforcements, highlighting the lack of information available to judge means of implementation.

Discussing further problems, Guy noted existing tensions between democracy and society. He provided as examples, private versus public interest, perceptions of risk, and non environmental factors that contribute to the setting of environmental agendas. He also pointed out the difference between big issues such as soil degradation, water quality, groundwater pollution, air pollution, biodiversity loss, unsustainable fisheries, biosecurity, traffic congestion, degradation of icon sites and climate change that New Zealand is faced with but not well addressed, in contrast with minor issues that have been hyped up such as timberlands, genetic engineering and battles against wind farms and landfills. There is a lack of addressing and reporting of real issues.

In conclusion, Guy expressed that journalists have a huge capacity to provide people with insights that can help people understand the other side of the story. By explaining issues in a compelling way, journalists can help in solving environmental problems. Journalists need to be careful with existing bogus science that emerge from self interest, and need to consult with real scientists to find out the true picture. Given the responsibility of commentators, journalists need to take the opportunity of playing the role of a social critic informing the public about what is happening and what is not happening, and "identifying where we fall short of the sustainability ethic of advancing long-term collective well-being".

Session 4 (16 August 2005)

In the final session of the module, Jeanette Fitzsimons, Green Party co-leader presented the party's views about sustainability in New Zealand. She remarked that it was valuable for journalists to understand sustainability issues, as generally journalists lack an understanding. Referring to the book *Limits to Growth* Jeanette commented that the points that were made thirty years ago in the book were still valid today. While human activities increase, the planet remains the same in size, there exists a fixed amount of resources and there is a limit to the amount of wastes that can be absorbed by ecosystems. Jeannette expressed the opinion that sustainable development cannot be tightly defined and that it was the "ability of a system to keep going indefinitely".

In order to achieve a sustainable society, Jeannette noted that it was crucial that all energy is derived from renewable resources, materials need to be recycled and reused substantially and population needs to be limited. Jeannette also pointed out the emphasis on economic growth in government definitions of sustainable development and expressed the view that the Government's *Sustainable Development Plan of Action* was to be able to report at UN conferences and to be seen as doing something in the sustainability area. Referring to

Guy Salmon's presentation that provided 'decoupling' as a solution, Jeannette noted that although it was a good concept, it is valuable only in the short term. The idea that there can be perpetual economic growth is inaccurate, as there will be a limit. Besides this 'decoupling' is not happening much in New Zealand.

Jeannette then presented sustainable development as an integration of three items, i.e. economy, environment and society. If China consumed on a per capita level similar to the United States, oil resources and a number of other key resources can be depleted in months. This means that we need to live our lives in a way that would allow poorer countries like India and China to have an equal opportunity to reach equal levels of wellbeing.

In the past six years New Zealand has seen good economic progress; however, we are reaching the ecological limits. Greenhouse gas emissions have increased, with the Kyoto protocol we are in deficit of carbon credits, we are becoming more fossil fuel intensive and 95% of our lowland rivers and streams are no longer safe to swim in. There is a need to change our measurement of growth to one that takes into account wellbeing and the environment.

Jeannette next clarified that the Greens have never been only about the environment, but also works on other issues such as women's rights, human rights, children and education because these are interlinked issues. Social indicators such as the number of homeless people can be a measure of economic quality. Another good measure is the genie coefficient that measures the gap between the income of the top 20% and the bottom 20% of a population. It is usually the very rich and the very poor who cause the most environmental damage. The very poor need to burn cattle dung as fuel; while, it is hard to be rich and not use more things. She then noted that it was impossible to legislate for every aspect of sustainability; people need to understand what sustainability means and they need to want to change.

Pointing out some problems associated with media coverage, she noted the need for news to be constantly something new. Therefore important events such as the Millennium Ecosystem Report are covered only once and never mentioned again. Sound bites of 10 to 20 seconds allocated for environmental news is insufficient to explain the complexities of sustainability. There is a need for a larger analysis piece in the media. She also commented on advertising's pressure to consume and that it might be hard to expect the media to say that we are consuming too much, although fundamentally the newsroom is separated from advertising.

APPENDIX 6

Pre-course interview questions used in the evaluation of the module on sustainability introduced to the curriculum of the *Graduate Diploma in Journalism* programme at University of Canterbury, New Zealand in the academic year 2005

- 1 Have you had work published or broadcasted in a mass media prior to your current enrolment as a student? ☐ Yes ☐ No
- 2 To which type of mass media did you contribute?

<input type="checkbox"/> TV	<input type="checkbox"/> Magazine
<input type="checkbox"/> Radio	<input type="checkbox"/> Internet
<input type="checkbox"/> Newspaper	<input type="checkbox"/> Other.....
- 3 Have you worked for a mass media organisation prior to your current enrolment as a student?
☐ Yes ☐ No
- 4 If yes, which mass media type did you work with?

<input type="checkbox"/> TV	<input type="checkbox"/> Magazine
<input type="checkbox"/> Radio	<input type="checkbox"/> Internet
<input type="checkbox"/> Newspaper	<input type="checkbox"/> Other.....
- 5 What was your job title?
- 6 Did you specialise in any particular area?
- 7 Are you familiar with the concept of 'sustainability'? ☐ Yes ☐ No
- 8 In your own words, please explain your understanding of what 'sustainability' means?
- 9 Please indicate your personal beliefs about what 'sustainability' means?
- 10 What are the various factors that have contributed to your understanding and beliefs about 'sustainability'?

<input type="checkbox"/> Formal education	<input type="checkbox"/> Books
<input type="checkbox"/> Training programmes / Seminars	<input type="checkbox"/> Mass media (Newspapers, Magazines, Television)
<input type="checkbox"/> Conference / Conventions / Symposiums	<input type="checkbox"/> Religious beliefs
<input type="checkbox"/> Professional work experience	<input type="checkbox"/> Spiritual beliefs
<input type="checkbox"/> Voluntary work experience	<input type="checkbox"/> Others (Please specify)
- 11 Please specify any trainings or education on environmental or sustainability issues that you may have undergone.
- 12 Have you reported on environmental or sustainability issues in the past? ☐ Yes ☐ No
- 13 If yes, what issues or stories did you cover? Please provide a few titles.
- 14 When you wrote the story did you recognise it as a sustainability issue at that time? ☐ Yes ☐ No
- 15 In relation to Question 14, how did it affect how you approached the story?
- 16 Do you have a personal interest in reporting on environmental and sustainability issues when you start work? ☐ Yes ☐ No
- 17 If yes, what are the issues that interest you?
- 18 If no, what is the reason for your lack of interest?

APPENDIX 7

Post-Course interview questions used in the evaluation of the module on sustainability introduced to the curriculum of the *Graduate Diploma in Journalism* Programme at University of Canterbury, New Zealand in the academic year 2005

- 1 How many sessions of the sustainability module did you attend?
☐ 1 sessions ☐ 2 sessions ☐ 3 sessions ☐ 4 sessions
- 2 What were the most important messages that you gained from module?
- 3 How has the module impacted on your understanding of 'sustainability'?
- 4 In your own words describe your current understanding of 'sustainability'?
- 5 In the last five weeks, besides the sustainability module, have there been any other factors that had contributed to your understanding of sustainability?
☐ Seminars
☐ Conference / Symposiums
☐ Public meetings
☐ Books
☐ Mass media (Newspapers, Magazines, Television)
☐ Information on the internet
☐ Discussions with friends / family
☐ Others (Please specify).....
- 6 After completing the Graduate Diploma in Journalism, do you intend to pursue your career in mass communication?
☐ Yes ☐ No
- 7 What area of would you like to specialise in?
- 8 How would you apply what you learned from the sustainability module to this area?
- 9 If your answer to Question 7 was environmental reporting, what was your motivation to take on this area of specialisation?
- 10 How has the module impacted on your personal beliefs about what sustainability means?
- 11 What were the sessions of the module or issues raised that impacted on your personal beliefs?
- 12 How has the module impacted on your interest in reporting on environmental and sustainability issues?
- 13 What were the sessions of the module or issues raised that provoked your interest?
- 14 In general how would you rate the sustainability module in terms of equipping you with the knowledge to report on environmental and sustainability issues?
- 15 What is the most important / biggest impact that the sustainability module had on you?
- 16 Do you have any suggestions for improvements to the module?
- 17 This questionnaire has been designed to cover all possible areas of enquires to achieve its intended objectives; however, it is possible that some areas may have been overlooked. Please add any further comments that you feel can contribute to the aims of this research.

APPENDIX 8

E-mail questionnaire used in the long-term impact assessment of the module on sustainability introduced to the curriculum of the *Graduate Diploma in Journalism* programme at University of Canterbury, New Zealand in the academic year 2005

Dear.....

Re: Introduction of a module on sustainability to the Graduate Diploma in Journalism Programme at University of Canterbury: An assessment of long-term impacts

I would like to invite your participation in the above research. The objective of this component of my research is to evaluate if the module on sustainability resulted in any longer term impacts.

The questionnaire follows; it consists of seven questions and will require approximately 15 minutes of your time.

This research is based on voluntary participation and adheres to anonymity and confidentiality. I would greatly appreciate your time and contribution to this research, and I look forward to your response.

Thank you.

Yours sincerely,

Komathi Kolandai

Please type an (X) within the brackets to indicate your answers. For open ended questions, please type in your answer below each question. To avoid the >> symbols when you click reply, just copy the section below and paste on to a new email before you type in your answers. That makes it appear less messy.

1 Are you currently working with a media organisation?

If yes, which mass media type do you work with?

☐ TV

☐ Magazine

☐ Radio

☐ Internet

☐ Newspaper

☐ Other (Please specify)

If no, what is your field of employment?

2. What is your job title?

3. What is your area of specialisation?

4. Have you done any reporting related to sustainability issues since you started work?

☐ YES -- What did you cover? Please provide a few titles.

☐ NO -- Why you were not able to do so?

5. Were you able to apply what you learned from the sustainability module of the UC Graduate Diploma in Journalism programme to your work?

☐ YES -- Please provide examples of how you applied what you learned to your work.

☐ NO -- Why you were not able to do so?

6. Besides the module on sustainability, what other factors have contributed to your abilities in reporting topics related to sustainability issues?

7. Has your organisation been supportive in your attempts to report topics related to sustainability?

☐ YES -- How were they supportive?

☐ NO -- What problems did you face?

APPENDIX 9

E-mail questionnaire to journalism course-coordinators used in the assessment of the integration of sustainability in the curriculum of journalism courses in New Zealand institutions of higher education

Dear.....

I am presently conducting PhD research on the communication of sustainability, under the supervision of Jim Tully, Head of the School of Political Science and Communication, University of Canterbury.

My research involved an impact assessment of a module on sustainability that was introduced to University of Canterbury's Graduate Diploma in Journalism programme last year. Communication of sustainability issues is becoming increasingly important and the roles of media have been noted under the United Nations Decade of Education for Sustainable Development (2005-2014) implementation plans. Since training and education in sustainability issues and environmental reporting can be a determining factor of the quality of reporting of these topics, as part of my research, I would like to find out to what extent sustainability and environmental issues reporting are included in the curriculum of journalism programmes in New Zealand. I would appreciate if you are able to answer the following questions.

- 1 Does the programme content / curriculum of your national diploma in journalism programme and / or degree programme include a module on sustainability issues reporting?

If yes, please provide the following details:

- a. What is the title of the module?
- b. How many teaching sessions and number of hours does the module include?
- c. What assessment tasks does the module include?

If no, are there plans underway for the inclusion of such a module?

- 2 Does the programme content / curriculum of your national diploma in journalism programme and / or degree programme include a module on environmental issues reporting?

If yes, please provide the following details:

- a. What is the title of the module?
- b. How many teaching sessions and number of hours does the module include?
- c. What assessment tasks does the module include?

If no, are there plans underway for the inclusion of such a module?

This research is based on voluntary participation and adheres to anonymity and confidentiality.

I would greatly appreciate the time and contribution of your organisation to this research, and I look forward to your response.

Thank you.

Yours sincerely,
Komathi Kolandai

APPENDIX 10

E-mail questionnaire to reporters covering environmental and sustainability issues in New Zealand mainstream media in the assessment of New Zealand media receptiveness towards communicating sustainability

QUESTIONNAIRE 1

For multiple-choice questions, please indicate your answers with a [X] in the brackets. Unless specified, indicate one answer only. Sections are provided under relevant questions for optional comments. Any additional comments you provide would be highly appreciated.

Q1. What is your job title?

Q2. How many years of reporting experience do you have?

Q3. Which of the following round(s) do you cover? (Indicate as many as relevant)

- | | |
|-----------------------------|-------------------------------------|
| 1 [] Agriculture / Farming | 12 [] Lifestyle / Leisure |
| 2 [] Business | 13 [] Local Government |
| 3 [] Court / Crime | 14 [] Motoring |
| 4 [] Culture | 15 [] Politics |
| 5 [] Development | 16 [] Science and Technology |
| 6 [] Economy | 17 [] Social Issues / Society |
| 7 [] Education | 18 [] Sports |
| 8 [] Energy | 19 [] Tourism |
| 9 [] Entertainment | 20 [] Travel |
| 10 [] Environment | 21 [] Transport |
| 11 [] Health | 22 [] Others (Please Specify)..... |

Comments:.....

Q4. In addition to any formal journalism education, what trainings relevant to the environment round have you completed? (Indicate as many as relevant)

- 1 [] None
- 2 [] Training in reporting sustainability issues
- 3 [] Training in science reporting
- 4 [] Training in environmental reporting
- 5 [] Others (Please Specify):--

Q5. Did your formal journalism education include a subject or module on environmental reporting?

- 1 [] Yes (Please Specify).....
- 2 [] No

Q6. In your own words, please explain your understanding of 'sustainable development'.

Q7. In your own words, please explain your understanding of 'sustainable consumption'.

Q8. How did you gain the understanding of sustainability you have expressed in Q.6 and Q.7?

Q9. From the following list of rounds, which do you believe have relevance to sustainability? Indicate if you believe it has - [H] = High relevance, [M] = Moderate relevance or [N] = No relevance. (Indicate for all)

- | | |
|-----------------------------|-------------------------------------|
| 1 [] Agriculture / Farming | 12 [] Lifestyle / Leisure |
| 2 [] Business | 13 [] Local Government |
| 3 [] Court / Crime | 14 [] Motoring |
| 4 [] Culture | 15 [] Politics |
| 5 [] Development | 16 [] Science and Technology |
| 6 [] Economy | 17 [] Social Issues / Society |
| 7 [] Education | 18 [] Sports |
| 8 [] Energy | 19 [] Tourism |
| 9 [] Entertainment | 20 [] Travel |
| 10 [] Environment | 21 [] Transport |
| 11 [] Health | 22 [] Others (Please Specify)..... |

Comments:.....

QUESTIONNAIRE 2

Sustainable development is defined as “development that meets the needs of the present generation without compromising the ability of future generations to meet their needs” (World Commission on Environment & Development, 1987, Our Common Future).

Sustainable consumption is defined as “the use of services and products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations” (OECD, 2002, Policies to Promote Sustainable Consumption: An Overview).

"For development to be sustainable, it must take account of social and ecological factors, as well as economic ones; of the living and non-living resource base; and of the long-term as well as the short-term advantages and disadvantages of alternative actions" (IUCN/WWF/UNEP, 1980, The World Conservation Strategy: Living Resource Conservation for Sustainable Development.).

PART 1: Given the above definitions that explain the principle of sustainability, please indicate answers that best describe your reporting of issues related to sustainability.

Q10. In a month how much of your work time is spent on reporting issues related to sustainability?

- | | |
|--|---|
| 0[<input type="checkbox"/>] None of my time | 3[<input type="checkbox"/>] Half of my time |
| 1[<input type="checkbox"/>] Less than quarter of my time | 4[<input type="checkbox"/>] Three quarters of my time |
| 2[<input type="checkbox"/>] Quarter of my time | 5[<input type="checkbox"/>] All of my time |

Q11. When you are reporting an issue related to sustainability, how frequently do you use the following information sources? Indicate if you use it: [F] = Frequently (in more than half the reports), [S] = Sometimes (in less than half the reports), or [N] = Never. (Indicate for all)

- | | |
|--|---|
| 1 [<input type="checkbox"/>] Business / Industry | 7 [<input type="checkbox"/>] Politicians |
| 2 [<input type="checkbox"/>] Citizens / Public | 8 [<input type="checkbox"/>] Scientific journals / publications |
| 3 [<input type="checkbox"/>] Environmental Interest Groups | 9 [<input type="checkbox"/>] Social Interest Groups |
| 4 [<input type="checkbox"/>] Government officials | 10[<input type="checkbox"/>] University researchers / academics |
| 5 [<input type="checkbox"/>] Internet | 11[<input type="checkbox"/>] Others (Please Specify)..... |
| 6 [<input type="checkbox"/>] Other mass medium | |
| Comments..... | |

Q12. When you are reporting an issue related to sustainability how important are the coverage of the following aspects? For each please indicate if it is highly important [H], moderately important [M] or not important [N].

- 1 [☐] Actions that can be taken by businesses/industry
- 2 [☐] Actions that can be taken by government
- 3 [☐] Actions that can be taken by public
- 4 [☐] Appreciation of intergenerational equity (Equality between this and future generations)
- 5 [☐] Appreciation of intra-generational equity (Equality between people in the current generation)
- 6 [☐] Appreciation of the natural environment
- 7 [☐] Existing policies concerning the issue
- 8 [☐] Explanation of scientific and technical information
- 9 [☐] How problems can be avoided in future
- 10[☐] Inter-relations between economic, social and environmental aspects
- 11[☐] Inter-relations between global and local aspects
- 12[☐] Lack of policies concerning the issue
- 13[☐] Meaning of sustainability
- 14 [☐] Points that invite public debate
- 15 [☐] Points that trigger public interest
- 16 [☐] Possible solutions
- 17 [☐] Previous success stories in dealing with the problem
- 18 [☐] Risks to future generations
- 19 [☐] Underlying causes of a problem
- 20 [☐] Others (Please Specify).....
- Comments.....

PART 2: This section of the questionnaire intends to assess the present status of sustainability issues reporting in New Zealand mass media. In response to the following statements; please indicate answers that best describe the situation in your organisation. Unless specified please indicate ONE answer only.

Q11. How would you rank the importance given to covering issues related to sustainability in your organisation?

1 ☐ Highest priority

2 ☐ High priority

3 ☐ Average priority

Comments.....

4 ☐ Low priority

5 ☐ Lowest priority

Q14. Which of the following factors would cause a sustainability issue to be deemed newsworthy by your organisation? For each please indicate if it is highly newsworthy [H], moderately newsworthy [M] or not newsworthy [N].

1 ☐ Catastrophe

2 ☐ Celebrity/prominent personality associated with the issue

3 ☐ Conflict of interest

4 ☐ Contradiction in views

5 ☐ Crisis / Emergency

6 ☐ Immediate environmental impact

7 ☐ Immediate impact on economy

Comments.....

8 ☐ Immediate impact on society

9 ☐ Possible environmental impact/environmental risks

10 ☐ Possible impact on economy

11 ☐ Possible impacts on future human generations

12 ☐ Others (Please Specify).....

Q15. Journalistic balance is **HIGHLY EMPHASISED** by my organisation when reporting an issue related to sustainability (For example a polluting company's perspective and issues related to the pollution itself are given balanced coverage).

1 ☐ Definitely true

2 ☐ Somewhat true

3 ☐ Not true

Comments.....

Q16. Journalistic balance is **LESS EMPHASISED** by my organisation in other areas of reporting such as motoring and sports. [For example, motoring journalists are given the freedom to promote cars without discussing its environmental performances. Sporting events such as golf and car races, do not discuss environmental impacts]

1 ☐ Definitely true

2 ☐ Somewhat true

3 ☐ Not true

Comments.....

NOTE:

For Q.17 – Q.19: Evaluation of information means that although the reporter provides both sides of the story, he or she makes it clear which side of the story has more facts or data to support their claims or which side has more accurate claims. So anyone who reads the story or hears it on the news will be able to make a judgement easily. For example in the case of climate change, if there are 10 scientific facts that say it is a serious threat and only 3 that say it is not, then this is made clear to the reader through evaluation. Evaluation may be discouraged because the information from all sides of the story needs to be presented in a highly balanced manner - equally. To be totally objective, accuracy or value of the information provided by the various parties is not judged at all by the reporter.

Q17. Evaluation of information concerning sustainability issues is **ENCOURAGED** by my organisation to facilitate public judgement of the issues.

1 ☐ Definitely true

2 ☐ Somewhat true

3 ☐ Not true

Comments.....

Q18. Evaluation of information concerning sustainability issues is **DISCOURAGED** by my organisation because of the stance that evaluation undermines journalistic balance.

1 ☐ Definitely true

2 ☐ Somewhat true

3 ☐ Not true

Comments.....

- Q19. Evaluation of information concerning sustainability issues is DISCOURAGED by my organisation because of the stance that the public should be free to make their own judgement about the issues.

1 [] Definitely true 2 [] Somewhat true 3 [] Not true
Comments.....

PART 3: The following questions aim to access your beliefs about what your organisation might do. Please indicate ONE answer only.

- Q20. Accepting that the media have influence in shaping householder's behaviour such as recycling; do you believe your organisation would take on a proactive role in shaping sustainable consumption behaviour in New Zealand society?

1 [] Yes 2 [] Likely 3 [] Unlikely 4 [] No
Comments.....

- Q21. It has been a criticism that while a large portion of media content encourages consumerism, little is done to examine the impacts of unrestricted consumerism. In order to promote sustainable consumption in New Zealand, do you believe your organisation would run programmes / articles that discuss the negative social and environmental impacts of excessive consumerism?

1 [] Yes 2 [] Likely 3 [] Unlikely 4 [] No
Comments.....

- Q22. In order to address the link between advertising and excessive consumerism, do you believe your organisation would assist in increasing public awareness about the use of psychology in advertising and its impact on adults and children?

1 [] Yes 2 [] Likely 3 [] Unlikely 4 [] No
Comments.....

- Q23. Do you believe your organisation would be receptive to taking on an educational role in communicating sustainability issues to the public?

1 [] Yes 2 [] Likely 3 [] Unlikely 4 [] No
Comments.....

PART 4: This section of the questionnaire attempts to identify needs of reporters and the media in general in reporting sustainability issues and factors that can boost reporting.

- Q24. What are the main problems you face when reporting sustainability issues? (Indicate as many as relevant)

1 [] An expectation that balance and objectivity are strictly adhered to
2 [] Chief reporter's / editor's / news director's lack of interest
3 [] Limited understanding of sustainability issues
4 [] Difficulty in evaluating disputes concerning issues
5 [] Difficulty in evaluating uncertainty concerning issues
6 [] Difficulty in interpreting scientific / technical information
7 [] Difficulty in locating reliable information sources
8 [] Lack of financial resources available to conduct investigation
9 [] Lack of time to investigate issues
10 [] Pressure to make sustainability stories exciting
11 [] Others (Please Specify).....
Comments.....

- Q25. Which of the following factors that impact on the quantity and quality of sustainability issues reporting have you observed in your organisation? (Indicate as many as relevant)

1 [] A belief that the public is not interested in sustainability issues
2 [] A belief that there are not many issues related to sustainability to report on
3 [] An implicit expectation to protect advertisers and sponsors

- 4 [] Competition for space / airtime – priority given to other types of news
 - 5 [] Lack of understanding of sustainability issues among chief reporters/editors/news directors
 - 6 [] Limited space / airtime allocated
 - 7 [] Organisation's focus on financial profits
 - 8 [] Organisation's preference for entertaining news and programmes
 - 9 [] Sustainability issues are regarded as non-events
 - 10 [] Sustainability issues are regarded not newsworthy
 - 11 [] Others (Please Specify).....
- Comments.....

Q26. What would you say are the most pressing needs in your organisation in order to improve coverage of sustainability issues? (Indicate as many as relevant)

- 1 [] A specialist reporter in this field
 - 2 [] Designated airtime / column to discuss sustainability
 - 3 [] Encouragement from editors / producers
 - 4 [] Information database on sustainability
 - 5 [] Internal policy or code of conduct to include sustainability in content
 - 6 [] Networking between reporters covering this field
 - 7 [] Recognition of reporter's contribution in this field
 - 8 [] Training in sustainability issues for editors / chief reporters / directors
 - 9 [] Training in sustainability issues for reporters
 - 10 [] Volunteered contributions from reliable information sources
 - 11 [] Others (Please Specify).....
- Comments.....

Q27. What are the most likely reasons that would cause an increase in coverage of sustainability issues in your organisation? (Indicate as many as relevant)

- 1 [] Government policies that encourage inclusion of sustainability in content
 - 2 [] Increase in sustainability problems / crisis
 - 3 [] Increase in sustainability related political debate / controversies
 - 4 [] Pressure from environmental and social interest groups
 - 5 [] Public demand / reader's letters
 - 6 [] Stronger social responsibility pressure on the media
 - 7 [] Others (Please Specify).....
- Comments.....

APPENDIX 11

Questions used in interviews with and survey of media managers in New Zealand mainstream media in the assessment of New Zealand media receptiveness towards communicating sustainability

INTRODUCTION: Sustainability is an issue that is gaining prominence both internationally and locally. The following are some definitions of sustainability that are frequently quoted:

Meaning of Sustainability

Sustainable development is defined as "...development that meets the needs of the present generation without compromising the ability of future generations to meet their needs"

(World Commission on Environment & Development, 1987, *Our Common Future*).

"Sustainable consumption is defined as "...the use of services and products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardise the needs of future generations"

(OECD, 2002, *Policies to Promote Sustainable Consumption: An Overview*).

"For development to be sustainable, it must take account of social and ecological factors, as well as economic ones; of the living and non-living resource base; and of the long-term as well as the short-term advantages and disadvantages of alternative actions"

(IUCN/WWF/UNEP, 1980, *The World Conservation Strategy: Living Resource Conservation for Sustainable Development*).

PART 1: I will start with some questions that aim to assess the present status of sustainability issues reporting in New Zealand mass media.

- 1 How many reporters do you have in your organisation, covering this area?
- 2 From this list of rounds, which do you believe have relevance to sustainability? For each please indicate if you believe it is has [H] high relevance, [M] moderate relevance or [N] no relevance.

1 [] Agriculture / Farming	12 [] Lifestyle / Leisure
2 [] Business	13 [] Local Government
3 [] Court / Crime	14 [] Motoring
4 [] Culture	15 [] Politics
5 [] Development	16 [] Science and Technology
6 [] Economy	17 [] Social Issues / Society
7 [] Education	18 [] Sports
8 [] Energy	19 [] Tourism
9 [] Entertainment	20 [] Travel
10 [] Environment	21 [] Transport
11 [] Health	22 [] Others (Please Specify).....
Comments.....	
- 3 How would you rank the importance given to covering issues related to sustainability in your organisation?

1[] Highest priority	4[] Low priority
2[] High priority	5[] Lowest priority
3[] Average priority	
- 4 What factors would cause a sustainability issue to be deemed newsworthy by your organisation? For each please indicate if it is highly newsworthy [H], moderately newsworthy [M] or not newsworthy [N].

1 [] Catastrophe
2 [] Celebrity/prominent personality associated with the issue
3 [] Conflict of interest
4 [] Contradiction in views
5 [] Crisis / Emergency

- 6 [] Immediate environmental impact
 - 7 [] Immediate impact on economy
 - 8 [] Immediate impact on society
 - 9 [] Possible environmental impact/environmental risks
 - 10 [] Possible impact on economy
 - 11 [] Possible impacts on future human generations
 - 12 [] Others (Please Specify).....
 - Comments.....
- 5 When reporting sustainability issues how important are the coverage of the following aspects to your organisation? For each please indicate if it is highly important [H], moderately important [M] or not important [N].
- 1 [] Actions that can be taken by businesses/industry
 - 2 [] Actions that can be taken by government
 - 3 [] Actions that can be taken by public
 - 4 [] Appreciation of intergenerational equity (Equality between this and future generations)
 - 5 [] Appreciation of intra-generational equity (Equality between people in the current generation)
 - 6 [] Appreciation of the natural environment
 - 7 [] Existing policies concerning the issue
 - 8 [] Explanation of scientific and technical information
 - 9 [] How problems can be avoided in future
 - 10 [] Inter-relations between economic, social and environmental aspects
 - 11 [] Inter-relations between global and local aspects
 - 12 [] Lack of policies concerning the issue
 - 13 [] Meaning of sustainability
 - 14 [] Points that invite public debate
 - 15 [] Points that trigger public interest
 - 16 [] Possible solutions
 - 17 [] Previous success stories in dealing with the problem
 - 18 [] Risks to future generations
 - 19 [] Underlying causes of a problem
 - 20 [] Others (Please Specify).....
 - Comments.....

PART 2: The next section of this interview aims to gain media response towards criticisms and concerns in relation to sustainability issues reporting, consumerism and advertising.

- 6 Some have pointed out that while balance is highly emphasised when reporting sustainability issues, other areas of reporting are less controlled. For example, a polluting company's perspective and issues related to the pollution itself are given balanced coverage. In contrast, motoring journalists are given the freedom to promote cars without discussing its environmental performances. Sporting events such as golf and car races, do not discuss environmental impacts. How would you respond to this criticism?
- 7 It has been reasoned that evaluated information concerning sustainability issues facilitates public judgement of the issues. In this case, evaluation means going a step further than just providing both sides of the story. The reporter makes it clear which side of the story has more facts or data to support their claims or which side has more accurate claims. In this way public judgement of the issue is facilitated. For example in the case of climate change, if there are 10 scientific facts affirming its seriousness and only 3 affirming otherwise, then this is made clear to the reader through evaluation. On the other hand, the media's concern is that evaluation of information may jeopardise journalistic balance, and that the public should be free to make their own judgement about issues. How does your organisation deal with this situation?
- 8 Accepting that the media have influence in shaping householder's behaviour such as recycling, would your organisation consider taking on a proactive role in shaping sustainable consumption behaviour in New Zealand society?

YES – What sort of content would that include?

NO – Why not?

- 9 Another criticism is that while a large portion of media content encourages consumerism, little is done to examine the impact of unrestricted consumerism. In order to promote sustainable consumption in New Zealand, would your organisation run programmes / articles that discuss the negative social and environmental impacts of excessive consumerism?

YES – What sort of content would that include?

Would there be concerns over potential risk to advertisers and corporate sponsors of your organisation?

NO – Why not?

- 10 In order to address the link between advertising and excessive consumerism, would your organisation assist in increasing public awareness about the use of psychology in advertising and its impact on adults and children?

YES– What sort of content would that include?

Would there be concerns over potential risk to advertisers and corporate sponsors of your organisation?

NO – Why not?

PART 3: The following section of the interview aims to attain media response towards an educational role in sustainability issues reporting

- 11 Would your organisation be receptive to an educational role in communicating sustainability issues to the public?

YES – What would be the scope of such a role? What sort of content would that involve?

NO – Why not?

United Nations Decade of Education for Sustainable Development (2005-2014)

“Because of its broad and deep impact, the media has a very important role to play in advocating for a more sustainable future. Media can share information and knowledge thus raising public awareness. The media can also change attitudes, mobilize support, and in the end alter policies. The media holds a pivotal advocacy position for ESD” (UNESCO 2005).

“Journalists and media organizations have an important role to play in reporting on issues and in helping raise public awareness of the various dimensions and requirements of sustainable development” (UNESCO 2005)

- 12 The roles of media have been noted under the United Nations Decade of Education for Sustainable Development (2005-2014) implementation plans (See excerpts above). New Zealand as a country has responded and is pursuing activities organised through a co-ordinating committee. Has your organisation considered initiatives for the DESD?

YES – What plans are underway?

NO – Are there likely to be any initiatives for the DESD?

PART 4: The next section of the interview aims to find out about existing policies that relates to sustainability.

- 13 Does your organisation have any policies concerning sustainability for the daily operations of your organisation, such as reductions in energy use?

YES – May I have a copy?

NO – Are there any plans underway for the adoption of such a policy?

- 14 Does your organisation have any policies or corporate social responsibility aims to include sustainability in content / programming?

YES – May I have a copy?

NO – Are there plans underway for the adoption of such a policy?

PART 5: The final section of this interview aims to identify needs of reporters and the media in general in reporting sustainability issues and factors that can boost reporting.

15 What would you say are the main problems reporters face when covering this area? (Select as many as relevant).

- 1 ☐ An expectation that balance and objectivity are strictly adhered to
- 2 ☐ Chief reporter's / editor's / news director's lack of interest
- 3 ☐ Limited understanding of sustainability issues
- 4 ☐ Difficulty in evaluating disputes concerning issues
- 5 ☐ Difficulty in evaluating uncertainty concerning issues
- 6 ☐ Difficulty in interpreting scientific / technical information
- 7 ☐ Difficulty in locating reliable information sources
- 8 ☐ Lack of financial resources available to conduct investigation
- 9 ☐ Lack of time to investigate issues
- 10 ☐ Pressure to make sustainability stories exciting
- 11 ☐ Others.....

16 Which of the following factors that impact on the quantity and quality of sustainability issues reporting have you observed in your organisation? (Select as many as relevant).

- 1 ☐ A belief that the public is not interested in sustainability issues
- 2 ☐ A belief that there are not many issues related to sustainability to report on
- 3 ☐ An implicit expectation to protect advertisers and sponsors
- 4 ☐ Competition for space / airtime – priority given to other types of news
- 5 ☐ Lack of understanding of sustainability issues among chief reporters/editors/news directors
- 6 ☐ Limited space / airtime allocated
- 7 ☐ Organisation's focus on financial profits
- 8 ☐ Organisation's preference for entertaining news and programmes
- 9 ☐ Sustainability issues are regarded as non-events
- 10 ☐ Sustainability issues are regarded not newsworthy
- 11 ☐ Others.....

17 What would you say are the most pressing needs in your organisation in order to improve coverage of sustainability issues? (Select as many as relevant).

- 1 ☐ A specialist reporter in this field
- 2 ☐ Designated airtime / column to discuss sustainability
- 3 ☐ Encouragement from editors / producers
- 4 ☐ Information database on sustainability
- 5 ☐ Internal policy or code of conduct to include sustainability in content
- 6 ☐ Networking between reporters covering this field
- 7 ☐ Recognition of reporter's contribution in this field
- 8 ☐ Training in sustainability issues for editors / chief reporters / directors
- 9 ☐ Training in sustainability issues for reporters
- 10 ☐ Volunteered contributions from reliable information sources
- 11 ☐ Others.....

18 What are the most likely reasons that would cause an increase in coverage of sustainability issues in your organisation? (Select as many as relevant).

- 1 ☐ Government policies that encourage inclusion of sustainability in content
- 2 ☐ Increase in sustainability problems / crisis
- 3 ☐ Increase in sustainability related political debate / controversies
- 4 ☐ Pressure from environmental and social interest groups
- 5 ☐ Public demand / reader's letters
- 6 ☐ Stronger social responsibility pressure on the media
- 7 ☐ Others.....

APPENDIX 12

Email questionnaire to sustainability advocates and proponents in the assessment of New Zealand media receptiveness towards communicating sustainability

Dear.....

I'd really appreciate it if you could respond to my quick survey. It comprises a single question, and will probably take about 5 minutes of your time. I would like to find out the perspective of sustainability advocates (i.e. YOUR views) about what makes a sustainability issue newsworthy, in the sense that - it should be given media coverage.

Thanks a million!

Komathi Kolandai

Note: Your participation in this research will be anonymous and confidential. Neither your name nor the name of your organisation will be mentioned in any publication related to this research. This research adheres to the principle of voluntary participation. You may withdraw your participation, including withdrawal of any information you have provided, until the contents of the survey has been added to the others collected. Because it is anonymous, it cannot be retrieved after that.

Question: How would you rate the newsworthiness of the following factors pertaining to a sustainability issue?

Indicate if it is -

[H] – Highly newsworthy,
[M] – Moderately newsworthy or
[N] – Not newsworthy.
(Please indicate for all)

- 1 [] Catastrophe
 - 2 [] Celebrity/prominent personality associated with the issue
 - 3 [] Conflict of interest
 - 4 [] Contradiction in views
 - 5 [] Crisis / Emergency
 - 6 [] Immediate environmental impact
 - 7 [] Immediate impact on economy
 - 8 [] Immediate impact on society
 - 9 [] Possible environmental impact/environmental risks
 - 10 [] Possible impact on economy
 - 11 [] Possible impacts on future human generations
 - 12 [] Others (Please Specify).....
- Comments.....

APPENDIX 13

Pre- and post-campaign interview questions used in the evaluation of the information campaign on sustainable consumption

ID Number:

Group: ☐ Experimental ☐ Control

Type of media used by participants (Pre-campaign)

ANSWER CARD: 1 Daily 2 Few times a week 3 Few times a month 4 Never 5 Don't Know

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1 | How often do you watch TV? | ① | ② | ③ | ④ | ⑤ |
| 2 | How often do you listen to the radio? | ① | ② | ③ | ④ | ⑤ |
| 3 | How often do you read the newspapers? | ① | ② | ③ | ④ | ⑤ |
| 4 | How often do you read commercial magazines? | ① | ② | ③ | ④ | ⑤ |

ANSWER CARD: 1 Christchurch Mail 2 The Star 3 STANN 4 Don't receive any 5 Others

- 5 Which of these community newsletters or newspapers do you receive?

ANSWER CARD: 1 Every issue 2 Most issues 3 Rarely 4 Never 5 Don't Know

- | | | | | | | |
|---|---|---|---|---|---|---|
| 6 | How often do you read these newsletters / newspapers? | | | | | |
| | Christchurch Mail | ① | ② | ③ | ④ | ⑤ |
| | The Star | ① | ② | ③ | ④ | ⑤ |
| | STANN | ① | ② | ③ | ④ | ⑤ |
| | Don't receive any | ① | ② | ③ | ④ | ⑤ |

Children's exposure to media and perceived effects (Pre-campaign)

- 1 Do you have children / grandchildren? Are they dependent children?
① No ② Dependent children ③ Independent children ④ Grandchildren
- 2 What are their ages?

ANSWER CARD: 1 Daily 2 Few times a week 3 Few times a month 4 Never 5 Don't Know

- | | | | | | | |
|---|--|---|---|---|---|---|
| 3 | How often do they watch TV? | ① | ② | ③ | ④ | ⑤ |
| 4 | How often do they listen to the radio? | ① | ② | ③ | ④ | ⑤ |
| 5 | How often do they read the newspapers? | ① | ② | ③ | ④ | ⑤ |
| 6 | How often do they read commercial magazines? | ① | ② | ③ | ④ | ⑤ |

ANSWER CARD: 1 Every issue 2 Most issues 3 Rarely 4 Never 5 Don't Know

- | | | | | | | |
|---|---|---|---|---|---|---|
| 7 | How often do they read community newsletters or newspapers? | | | | | |
| | Christchurch Mail | ① | ② | ③ | ④ | ⑤ |
| | The Star | ① | ② | ③ | ④ | ⑤ |
| | STANN | ① | ② | ③ | ④ | ⑤ |
| | Don't receive any | ① | ② | ③ | ④ | ⑤ |

- 8 How are your children affected by the media contents that they are exposed to?

Shopping Behaviour (Pre- and post- campaign)

- 1 When shopping for food items what are the four most important factors that determine your decision to buy? Why have you chosen....?

ANSWER CARD:

- | | | |
|--------------------------|-------------------------|---------------------------|
| 1 Recommendations | 8 Quality | 15 Fair trade labels |
| 2 Recyclable packaging | 9 Minimum packaging | 16 Convenience |
| 3 Affordability | 10 Brand name | 17 Product contents |
| 4 Organic labels | 11 Environment labels | 18 Locally grown |
| 5 Sales/Price reductions | 12 Advertisement info. | 19 Producing country |
| 6 Taste | 13 Imported produce | 20 Other (Please specify) |
| 7 Necessity / Need | 14 Attractive packaging | |

- 2 When shopping for cleaning products or toiletries what are the four most important factors that determine your decision to buy? Why have you chosen....?

ANSWER CARD:

- | | | |
|--------------------------|-------------------------|----------------------------|
| 1 Recommendations | 9 Minimum packaging | 17 Convenience |
| 2 Recyclable packaging | 10 Brand name | 18 Product contents |
| 3 Affordability | 11 Solves problem | 19 Local product |
| 4 Organic labels | 12 Environment labels | 20 Producing country |
| 5 Sales/Price reductions | 13 Advertisement info. | 21 Non animal tested |
| 6 Makes me happy | 14 Imported product | 22 Practicality/usefulness |
| 7 Necessity / Need | 15 Attractive packaging | 23 Other (Please specify) |
| 8 Quality | 16 Fair trade labels | |

- 3 When purchasing an item of luxury what are the four most important factors that determined your decision to buy? In this case, a luxury item means something that is not to meet basic needs. Why have you chosen....?

ANSWER CARD:

- | | | |
|---------------------------|------------------------|----------------------------|
| 1 Recommendations | 11 Environment labels | 21 Local product |
| 2 Recyclable materials | 12 Advertisement info. | 22 Producing country |
| 3 Price / Affordability | 13 Durability | 23 Non animal tested |
| 4 Energy Efficiency | 14 Prestigiousness | 24 Practicality/Usefulness |
| 5 Sales/ Price reductions | 15 Impressiveness | 25 Trendy |
| 6 Makes me happy | 16 Imported product | 26 Stylish |
| 7 Quality | 17 Attractiveness | 27 Fashionable |
| 8 Minimum packaging | 18 Fair trade labels | 28 Repairable |
| 9 Brand name | 19 Convenience | 29 Other (Please specify) |
| 10 Solves problem | 20 Product content | 30 I don't buy anything |

- 4 Do you ever go shopping as a pastime?

ANSWER CARD: 1 No 2 Sometimes 3 Yes 4 Not sure

- 5 Why?

- 6 (If yes) How does it make you feel?

- 7 Is there anything about your shopping behaviour that you wish you could change?

Views about Consumerism (Pre- and post-campaign)

- 1 What does the term consumerism mean to you?

- 2 Do you have any personal views about consumerism?

ANSWER CARD:

- | | |
|--|--|
| 1 My view, strongly agree | 4 Mixed view, disagree more than agree |
| 2 Mixed view, agree more than disagree | 5 Not my view, strongly disagree |
| 3 Completely neutral | 6 I don't know |

- | | | | | | | |
|--|---|---|---|---|---|---|
| 3 Increase in consumerism is a good thing because it boosts economic growth | ① | ② | ③ | ④ | ⑤ | ⑥ |
| 4 Increase in consumerism is not a good thing because it contributes to social inequality | ① | ② | ③ | ④ | ⑤ | ⑥ |
| 5 Consumerism keeps people happy | ① | ② | ③ | ④ | ⑤ | ⑥ |
| 6 Consumerism contributes to various types of stress in society | ① | ② | ③ | ④ | ⑤ | ⑥ |
| 7 Consumerism contributes to waste and pollution | ① | ② | ③ | ④ | ⑤ | ⑥ |
| 8 Although consumerism contributes to waste and pollution, new technologies will help deal with these problems | ① | ② | ③ | ④ | ⑤ | ⑥ |
| 9 A good solution for waste and pollution problems is moderate consumerism | ① | ② | ③ | ④ | ⑤ | ⑥ |

- 10 Can New Zealand be categorised as a consumerist society?
- 11 If no, which country would you consider to be a consumerist society?
- 12 What do you think drives consumerism (in New Zealand society)?
- 13 What are the various factors that have contributed to the views you have expressed about consumerism?

ANSWER CARD:

- | | | |
|-------------------------|---------------------------------|----------------------------|
| 1 Television | 9 Spiritual beliefs | 17 Public lectures |
| 2 Radio | 10 Political views | 18 Conferences |
| 3 Newspapers | 11 Professional work experience | 19 Friends |
| 4 Community newsletters | 12 Voluntary work experience | 20 Family |
| 5 Magazines | 13 Formal education | 21 Observations |
| 6 Books | 14 Self-education | 22 Life experiences |
| 7 Internet | 15 Training program | 23 Self awareness |
| 8 Religious beliefs | 16 Political campaigns | 24 Others (please specify) |

Which Community Newspaper?

ANSWER CARD: 1 Christchurch Mail 2 The Star 3 STANN 4 Others

Understanding / Views about Sustainable consumption (Pre- and post-campaign)

- 1 Are you familiar with the term, sustainable consumption?
- 2 What does the term sustainable consumption mean to you?

ANSWER CARD:

- | | |
|--|--|
| 1 My view, strongly agree | 4 Mixed view, disagree more than agree |
| 2 Mixed view, agree more than disagree | 5 Not my view, strongly disagree |
| 3 Completely neutral | 6 I don't know |

- 3 Sustainable consumption helps bring about social equality ① ② ③ ④ ⑤ ⑥
- 4 Economic growth should be prioritised over sustainable consumption ① ② ③ ④ ⑤ ⑥
- 5 Sustainable consumption helps reduce environmental problems like waste and pollution ① ② ③ ④ ⑤ ⑥
- 6 Ensuring a wide range of products in the market should be prioritised over sustainable consumption ① ② ③ ④ ⑤ ⑥
- 7 Sustainable consumption means that things are produced more efficiently ① ② ③ ④ ⑤ ⑥
- 8 Assurance of cheaper products for consumers should be prioritised over sustainable consumption ① ② ③ ④ ⑤ ⑥
- 9 Are you aware of any government legislation or regulation related to sustainable consumption? Can you name one?
- 10 Do you think New Zealand needs more prominent policies on sustainable consumption?
- 11 What are the various factors that have contributed to your understanding and views about sustainable consumption?

ANSWER CARD:

- | | | |
|---------------------|---------------------------------|---------------------|
| 1 Television | 9 Spiritual beliefs | 17 Public lectures |
| 2 Radio | 10 Political views | 18 Conferences |
| 3 Newspapers | 11 Professional work experience | 19 Friends |
| 4 Comm. newsletters | 12 Voluntary work experience | 20 Family |
| 5 Magazines | 13 Formal education | 21 Observations |
| 6 Books | 14 Self-education | 22 Life experiences |
| 7 Internet | 15 Training programme | 23 Self awareness |
| 8 Religious beliefs | 16 Political campaigns | 24 Others |

Which Community Newspaper?

ANSWER CARD: 1 Christchurch Mail 2 The Star 3 STANN 4 Others

Views about advertisements (Pre- and post-campaign)

- 1 What do you feel about the advertisements that you are exposed to in your life?
- 2 Can you think of an advertisement that you had a strong reaction to?
- 3 In general do you think commercial advertisements are effective in influencing people's purchase decisions?

ANSWER CARD: 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't Know

- 4 Do you think commercial advertisements have an influence on your own purchase decisions?

ANSWER CARD: 1 Often 2 Sometimes 3 Rarely 4 Never 5 Don't Know

- 5 How do you think commercial advertisements influence people's purchase decisions?

- 6 What are the various factors that have contributed to your views about commercial advertisements?

ANSWER CARD:

- | | | |
|---------------------|---------------------------------|---------------------|
| 1 Television | 9 Spiritual beliefs | 17 Public lectures |
| 2 Radio | 10 Political views | 18 Conferences |
| 3 Newspapers | 11 Professional work experience | 19 Friends |
| 4 Comm. newsletters | 12 Voluntary work experience | 20 Family |
| 5 Magazines | 13 Formal education | 21 Observations |
| 6 Books | 14 Self-education | 22 Life experiences |
| 7 Internet | 15 Training programme | 23 Self awareness |
| 8 Religious beliefs | 16 Political campaigns | 24 Others |

Which Community Newspaper?

ANSWER CARD: 1 Christchurch Mail 2 The Star 3 STANN 4 Others

Background details (Pre-campaign)

- 1 Gender ① Female ② Male

- 2 Which is your age group?

ANSWER CARD:

- | | | |
|---------|---------|---------|
| 1 16-20 | 4 41-50 | 7 71-80 |
| 2 21-30 | 5 51-60 | 8 81-90 |
| 3 31-40 | 6 61-70 | 9 90+ |

- 3 Are you ① Single ② With partner

- 4 What is your highest level of education?

ANSWER CARD:

- | | | |
|-----------|-----------------------|--------------|
| 1 None | 3 Secondary | 5 University |
| 2 Primary | 4 Training Institutes | 6 Other |

- 5 Are you employed?

ANSWER CARD: 1 Yes, full time 2 Yes, part time 3 No

- 6 What is (was) your occupation?

- 7 What is your approximate weekly income after tax?

ANSWER CARD:

Individual Income

1 \$199 or less

2 \$200-399

Family Income

1 \$399 or less

2 \$400-799

3	\$400-599	3	\$800-1199
4	\$600-799	4	\$1200-1599
5	\$800 over	5	\$1600 over

- 8 After payment of food, power, household operations, housing and transport how much are you left with each week approximately?

ANSWER CARD:			
Individual		Family	
1	\$99 or less	1	\$199 or less
2	\$100-199	2	\$200-299
3	\$200-299	3	\$300-399
4	\$300-399	4	\$400-499
5	\$400-499	5	\$500-599
6	\$500 over	6	\$600 over

- 9 Are you a member any society or organisation? What is the society / organisation about?

- 10 When deciding to vote for a party which two policies are your main concerns?

ANSWER CARD:			
1	Trade policy	5	Environmental policy
2	Social policy	6	Tax policy
3	Business policy	7	Education policy
4	Health policy	8	Others (Please specify)

- 11 Do you recycle your waste materials?

ANSWER CARD:			
1	Always	4	No recycling bin
2	Sometimes	5	Other (Please specify)
3	Never		

- 12 Do you maintain a compost bin for your food scraps?

ANSWER CARD:			
1	Yes	3	No space
2	No	4	No facility provided

Perceived effects on children (Post-campaign)

- How are your children affected by the mass media contents that they are exposed to?
- In the past four months have there been any factors that encouraged you to become more watchful of the effects of commercial advertising on your children?

Determining exposure to campaign (Post-campaign)

- 1 Over the past 4 months have there been changes to your views about consumerism?

ANSWER CARD: 1 Big Change 2 Minor Change 3 No change 4 Don't know			
---	--	--	--

- 2 What caused this change?

- 3 Over the past 4 months have there been changes to your understanding of sustainable consumption?

ANSWER CARD: 1 Big Change 2 Minor Change 3 No change 4 Don't know			
---	--	--	--

- 4 What caused this change?

- 5 Over the past 4 months have there been changes to your knowledge about how commercial advertisements work?

ANSWER CARD: 1 Big Change 2 Minor Change 3 No change 4 Don't know			
---	--	--	--

- 6 What caused this change?

- 7 Did you read any of the sustainable consumption awareness raising campaign articles that were published in Stann between Dec 2005 and March 2006?

8 (If yes), how many of these articles did you read?

ANSWER CARD: 1 None 2 One Issue 3 Two issues 4 Three issues 5 Can't recall

9 Did the campaign articles in Stann have an impact on what you have expressed about sustainable consumption in this interview?

ANSWER CARD: 1 Yes, very much 2 Yes, a little 3 No 4 Don't know

10 Did the campaign articles in Stann have an impact on what you have expressed about consumerism in this interview?

ANSWER CARD: 1 Yes, very much 2 Yes, a little 3 No 4 Don't know

11 Did the campaign articles in Stann have an impact on what you have expressed about advertising in this interview?

ANSWER CARD: 1 Yes, very much 2 Yes, a little 3 No 4 Don't know

12 Did the campaign articles motivate you to discuss sustainable consumption, consumerism or advertising with your children?

ANSWER CARD: 1 Yes, very much 2 Yes, a little 3 No 4 Don't know

13 Was this effective?

14 Did the first interview trigger an interest to acquire more information in any of the three areas we discussed? Did you discuss it with anyone?