

Whale Watching in the Southern Ocean



Dedicated to the memory of the baiji dolphin.

Abstract

Whale watching is regulated by the International Whaling Commission (IWC). Although reasonably productive, the bipolar nature of the organisation and the inherent association with non-lethal utilization with the anti-whaling lobby means regulation is required elsewhere to be truly effective. The need for regulation is clear, studies have shown approach behaviour, sounds made, duration of stay, and position in relation to other vessels, habituation responses, and many other factors can lead to negative consequences for cetaceans. The Southern Ocean is deemed particularly vulnerable, due to its central role in a large percentage of whale lifecycles and it has been made a sanctuary under the International Convention for the Regulation of Whaling (ICRW). However, there is no regulation applicable to the area other than the industry guidelines. Although more stringent than the ideal guidelines set down by the IWC and New Zealand's Marine Mammal Protection Regulations 1992, the significant expansion of the industry will not be conducive to keeping with its broad environmental goals. Under the Antarctic Treaty System, the Environmental Impact Analysis under the Environmental Protocol could be invoked. However, it is not an effective tool to use for the nature of whaling operations. Instead, a new instrument is proposed to regulate the growing tourist numbers with an Annex relevant to whale watching. More liberal powers of discussion and debate should be employed to allow the debate of the true political motives underlying decisions based on scientific uncertainty.

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"Man had always assumed that he was more intelligent than dolphins because he had achieved so much... the wheel, New York, wars, and so on, whilst all the dolphins had ever done was muck about in the water having a good time. But conversely the dolphins believed themselves to be more intelligent than man for precisely the same reasons."

-D Adams, *Hitchhikers Guide to the Galaxy* (1979).

1. Introduction

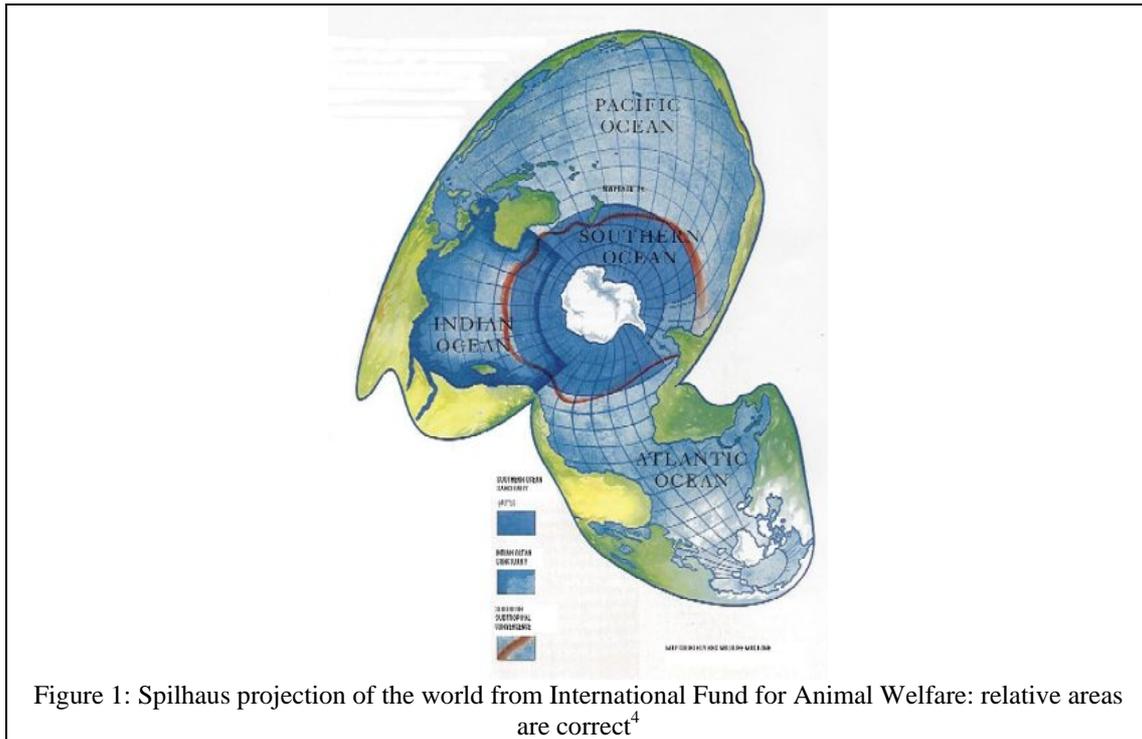
The allure of whales is a mysterious phenomenon that draws millions of people every year to spend money to look at large mammals flopping round in the water. Yet there is something about a whale that is utterly inspiring. Whale watching has been a billion dollar industry since 2001¹. In a 1999 report, Dr Mark Orams estimates one humpback whale returning each year to Tongan waters could generate \$1 million (USD) over 50 years, as opposed to the \$250,000 (USD) wholesale value on the Japanese market for the meat². Since then, whale watching in the Pacific Islands has increased by 45% and the main halt on growth has been the inconsistency of cetacean sightings³.

¹ E Hoyt, 'Whale Watching 2001: Worldwide Numbers, Expenditures, and Expanding Socioeconomic Benefits.' (2004) International Fund for Animal Welfare (IFAW).

² M B Orams, *The Economic Benefits of Whale Watching in Vava'u, The Kingdom of Tonga*. (1999) Centre for Tourism Research, Massey University.

³ IWC. *Annual Report of the Whaling Commission* (2005).

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The Southern Ocean forms the focal point for $\frac{3}{4}$ of the whale populations of the world⁵, demonstrated by Figure 1. Several species of Southern Ocean baleen whale population have been severely depleted through overfishing early in the century and only 5% of the initial estimated biomass remains⁶. The International Whaling Commission (IWC) set up the Southern Ocean Sanctuary in 1994 for the more general goal of providing a “comprehensive system for the conservation of whales.”⁷In 1938, nations first realised the fragility and importance of the Southern Ocean setting up a

⁴ IFAW ‘The Spilhaus Projection,’ *Protecting Whales and their Habitats*:

<http://www.ifaw.org/ifaw/general/default.aspx?oid=97534> at 5 February 2008.

⁵ IFAW. ‘The Southern Ocean Sanctuary,’ *Protecting Whales and their Habitats*:

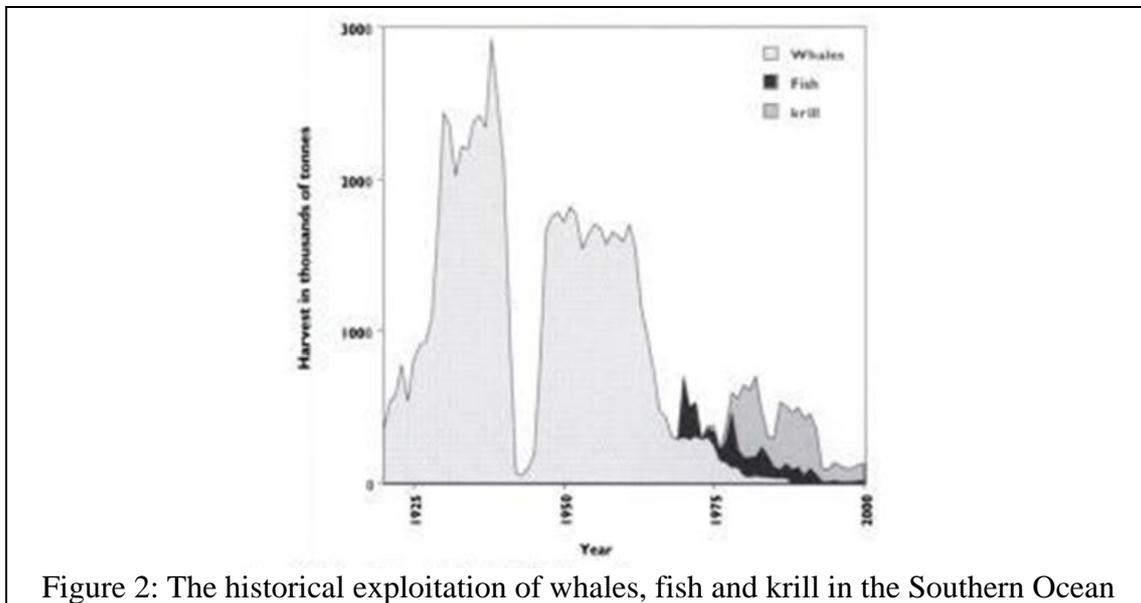
<http://www.ifaw.org/ifaw/general/default.aspx?oid=97516> at 5 February 2008.

⁶ R Leaper and M Scheidat, ‘An Acoustic Survey for cetaceans in the Southern Ocean Sanctuary Conducted from the German Government Research Vessel Polar Stern,’ (1998) *Report of the International Whaling Commission* 48.

⁷ A Gillespie, *Whaling Diplomacy: Defining Issues at International Law* (2005), 254.

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short lived sanctuary⁸. The importance of the Southern Ocean as a breeding, feeding and migration route cannot be understated.



However, the Southern Ocean remains one of the only unregulated whale watching locations in the world⁹. The history of whale exploitation has seen the emergence of a polarised regulatory body. The IWC is composed of elements who are completely against commercial whaling of any kind and a small minority who continue to whale in the face of a global moratorium and global political pressure to stop. Non-lethal utilization has become intrinsically linked with the anti-whaling position and despite the recognition by whaling nations that it is a legitimate activity under the IWC, it cannot be effectively regulated by a body which has been on the verge of collapse for almost a decade¹⁰.

⁸ Ibid, 251.

⁹ D A Fennell. 'A content analysis of ecotourism definitions.' (2001) *Current Issues in Tourism* 4 (5).

¹⁰ B T Hodges, 'The Cracking Façade of the International Whaling Commission as an Institution of International Law: Norwegian Small-Type Whaling and the Aboriginal Subsistence Exception' (2000) 15 *Journal of Environmental Law and Litigation* 295, 324.

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A large proportion of the Southern Ocean is covered by the Protocol of Environmental Protection to the Antarctic Treaty requiring Environmental Impact Analysis for any activities in the treaty area. The necessity to regulate whale watching activity is pressing. Tourist numbers are growing significantly in the Antarctic region¹¹, and almost all commercial operators engage in marine wildlife observation¹². The dangers unregulated whale watching can pose to cetaceans is significant, from mortality from ship based strikes to cumulative impacts leading to habituation, desertion of habitat and increase in energetic use¹³.

However, the EIA process suffers from significant drawbacks in the application to tourist activities. The central role science has played in the Antarctic Treaty System, particularly in relation to the precautionary approach employed by the Protocol is significant. Science is a process that very much exists as a political tool, evident through the use of scientific uncertainty in the IWC, yet a lot of significance is given to the data itself and the political nature of interpretations is often ignored¹⁴. What is needed is a more substantive ethical approach, considering the political implications and discussing openly the opinions of affected actors. A new approach is required to regulate whale watching and better reflect the actual political debate on hand.

¹¹ A D Hemmings and R Roura, 'A square peg in a round hole: fitting impact assessment under the Antarctic Environmental Protocol to Antarctic tourism,' (2003) *Impact Assessment and Project Appraisal* 21(1), 13.

¹² R Williams and K Crosbie, 'Antarctic Whales and Antarctic Tourism', IAATO Submission to ATCM XXIX (2006).

¹³ L Bejder and A Samuels, 'Evaluating Effects of Nature-Based Tourism on Cetaceans,' in N Gales, M Hindell, R Kirkwood (eds.), *Marine Mammals: Fishing Tourism and Management Issues* (2003), 230.

¹⁴ M Heazle, *Scientific Uncertainty and the Politics of Whaling* (2006), 186.

2. Setting the Scene: Relevant Regulation

A. Background

i. Origins of Whaling Regulation

Whaling regulation began as a response of the industry to severely dwindling whale numbers in the early twentieth century. Whales had traditionally been considered a free resource hunted in an organized fashion since the Basques of Biscay in the eleventh century¹⁵. However, the advent of new technologies in the middle of the eighteenth century, including harpoon guns, steam engines, slipways to pull the whales onto the ships¹⁶, and Norway's continued expansion of its whale taking capacity¹⁷, led to a conservationist approach to whaling. The failures of early conservation measures¹⁸ were largely due to limited scope, inadequate data, poor compliance by some whaling nations, minimal enforcement provisions, and lack of global interest¹⁹. A gradual change in international ideology from one of exploitation of whale stocks to conservation of the whale species began to emerge after the war years²⁰. The 1946 International Convention for the Regulation of Whaling²¹, in its

¹⁵ S Suhre, 'Misguided Morality: The Repercussions of the International Whaling Commission's Shift from a Policy of Regulation to One of Preservation' (1999) 23 *Georgetown International Law Review* 310, 318.

¹⁶ *Ibid*, 308.

¹⁷ 11,369 in 1919-1920, to 43,129 in 1931: A D'Amato and S K Chopra, 'Whales: Their Emerging Right to Life' (1991) 85 *American Journal of International Law* 21, 27.

¹⁸ *Ibid*, 28-32.

¹⁹ I P Birnie, *International Regulation of Whaling: From Conservation of Whaling to Conservation of Whales and Regulation of Whale Watching* (1985), 129-130.

²⁰ A D'Amato and S K Chopra, above n 17, 33.

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preamble, looked to the protection of the great resource of whale stocks for future generations, and the prevention of over fishing of all whale species²². Although clearly still a regulatory body designed to “establish a system of international regulation for the whale fisheries to ensure proper and effective conservation and development of whale stocks,”²³ proper conservation is identified as an essential measure towards this aim. Article 2 of the agreement formed the IWC composed of a member of each of the contracting governments, with the power to “adopt regulations with respect to the conservation and utilization of whale resources”²⁴ and “recommendations to any or all Contracting Governments on any matters which relate to whales or whaling and to the objectives and purposes of this Convention.”²⁵

The Commission was initially unsuccessful at achieving its ends. Poor enforcement, argument over quotas, and threats to leave the IWC, undermined the significant power the instrument bore²⁶. After the Stockholm Conference 1972, attitudes towards whales continued to shift from conservationist towards protectionist²⁷. Partially as a result of a Recommendation in the IWC, the Convention on International Trade in Endangered Species²⁸ placed all IWC Protected Species onto Appendix 1, banning the international trade in products originating from whales²⁹. In 1979, the Indian Ocean Sanctuary was established, banning commercial whaling in that area. Australia passed the *Whale Protection Act 1980*, prohibiting the killing of whales within their

²¹ Hereafter ICRW.

²² ICRW, Preamble.

²³ ICRW, Preamble.

²⁴ Listed in Article V (1).

²⁵ ICRW, Article VI.

²⁶ A D’Amato and S K Chopra, above n 17, 33.

²⁷ Ibid, 32

²⁸ Hereafter CITES.

²⁹ I P Birnie, above n 19, 394.

Exclusive Economic Zone, and banning the import of any whale products. With IWC membership growing from anti-whaling countries, the protectionist ethic became what D'Amico and Chopra describe as preservationist³⁰. The preservationist, as contrasted with the protectionist and conservationist, will not admit to exceptions and ultimately wants to ban all whaling³¹. The moratorium began in 1982, where the Seychelles passed a motion, setting all commercial quotas to zero by 1985-1986. By 1983 only Japan, Norway and the USSR formally objected to the regulation. The United States enforced an embargo on fishing rights within its exclusive economic zone and banning imports of fishing products of whaling nations³², and in 1985, as a result of the embargo, Japan agreed on the Moratorium³³.

ii. Non Lethal Methods

Out of the preservationist ethic, came a greater focus on non-lethal methods of exploiting whales. The ICRW does not mention non-lethal utilization of whales, being concerned primarily with conserving stocks for future use as a food source. Whale watching in the IWC has been an issue since 1975, when economic concerns from affected parties were introduced after boats entering breeding grounds. Dismissed in the 1982 meeting by a Commissioner of a leading whaling nation as “trivial”³⁴, its increasing economic importance, far outweighing the economic benefits and costs of whaling, has forced the issue into prominence³⁵. Since 1995, whale watching has been considered an important element of IWC's charter³⁶. Whale watching is now a billion

³⁰ A D'Amato and S K Chopra, above n 17, 45.

³¹ Ibid, 45.

³² Under the *Pelly Amendment to the Fisherman's Protective Act 1971*: S Suhre, above n 15, 317.

³³ A D'Amato and S K Chopra, above n 17, 47.

³⁴ IWC. *Thirty-second Report of the International Whaling Commission* (1982).

³⁵ E Hoyt, above n 1.

³⁶ Resolution 1996-2 on Whale Watching in IWC .

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dollar industry³⁷, and affects a much wider range of countries (66 independent countries and 21 overseas territories, including Antarctica, only 6 countries are involved in any form of lethal whaling)³⁸.

In the 2007 meeting of the IWC, member states passed a resolution on the non-lethal use of cetaceans (Appendix 1) effectively recognising the valuable benefits states can gain from whale watching and encouraging the contracting governments to work towards the incorporation of the needs of non-lethal users of whale resources in future decisions and agreements. Three defining features in this resolution are interesting and illustrate the general trend of the anti whaling Contracting Parties attitude towards the ICRW.

It states non-lethal exploitation is consistent with the original document; “recognising the objective of [ICRW] to safeguard the natural resources represented by whale stocks for the benefit of future generations”. Subsequently, it indicates the economic importance of whale watching to a “substantial portion of IWC membership” and the threat any move away from the moratorium may have on the industry. It notes the wider range of threats to cetacean populations in the 21st century to when the agreement was brought into effect. The primary risks to cetacean sustainability exist in the form of marine pollution and by catch³⁹. This indicates the importance of retaining strong boundaries on any direct exploitation of stocks, if indirect harms are threatening and ultimately It also cites a related agreement, the Buenos Aires Declaration which cites a well managed whale watching regime as promoting

³⁷ E Hoyt, above n 1.

³⁸ Ibid.

³⁹ A Gillespie, above n 7, 479; **Discussed at 3.i.**

economic, social and cultural growth whilst contributing to the protection of whale species. Despite passing with 40 nations supporting, 2 abstaining and 2 objecting, 20 did not even participate in the vote.

B. Problems with the IWC

i. Deadlock

The IWC has been decried as a failed international institution⁴⁰ mainly due to the deadlock that has formed within the parties to the treaty. A rival commission has been set up (the North Atlantic Marine Mammal Commission) and threatens to directly oppose the IWC. However, the issue can also be looked at a manifestation of the greater global understanding that ethical considerations must be considered in any international institution. Appeals to more democratic principles and cultural tolerance are discussed and often cited in the wider literature round the issue⁴¹, with examinations of the motivations of nations opposing whaling exposing underlying ethics. Either treatment illustrates the ICRW is not the ideal model to regulate whale watching activities.

The IWC has struggled to implement the moratorium since it was enacted⁴². Norway soon issued a reservation to the moratorium; Iceland left the IWC, and Japan continues whaling under scientific permits (Article VIII). Japan has an almost

⁴⁰ E.g. S Suhre, above n 15; K Sumi, 'The "Whale War" Between Japan and the United States: Problems and Prospects' (1989) 17 *Denver Journal of International Law and Policy* 317; W Aron, W Burke and M M R Freeman, 'The whaling issue,' (2000) *Marine Policy* 24, M Heazle, above n 14; B T Hodges, above n 10.

⁴¹ A Gillespie, above n 7; M Heazle, above n 14; A D'Amato and S K Chopra, above n 17.

⁴² A Gillespie, above n 7, 2.

bottomless market for whale meat and blubber⁴³. When the United Kingdom and Netherlands stopped whaling, Japan purchased most of their whaling ships, and began aggressive whaling, using up the both countries quotas⁴⁴. Several states also make use of the sustenance exception for aboriginal peoples⁴⁵. Norway, in its consistent objection to the moratorium only briefly lifted from 1991-1993, has pointed to the cultural imperialism of non whaling nations, attempting to enforce their cultures value systems on Norway and the inconsistency of an ethical moratorium with the purposes of the IWRC⁴⁶. Japan has flatly ignored IWC Recommendations to cease the lethal aspects of its research programs, suggesting their activities are primarily based in circumventing the cultural restrictions on the hunt.

Due to this pressure, the IWC has been under threat of collapse since the mid 1990s⁴⁷. A lack of enforcement measures within the treaty mean the moratorium can never be effectively enforced without a new treaty or UN Resolution⁴⁸. Unilateral action has proved in the past to be partially effective. The *Packwood-Magnuson Amendment*⁴⁹ allows for a President of the United States to issue sanctions in the advent of a country not meeting international obligations in relation to fisheries treaties. However, neither Clinton⁵⁰ or Bush have exercised this right in lieu of Norway's continuing objection to the moratorium, considering ongoing political relations more important than the

⁴³ W Aron, W Burke and M M R Freeman, above n 40, 315.

⁴⁴ A D'Amato and S K Chopra, above n 7, 32.

⁴⁵ W Aron, W Burke and M M R Freeman, above n 7; IWC, 'Aboriginal Sustenance Whaling,' (2004) <http://www.iwcoffice.org/conservation/aboriginal.htm> at 5 February 2007.

⁴⁶ S Suhre, above n 15, 313.

⁴⁷ B T Hodges, above n 10, 324.

⁴⁸ S Suhre, above n 15, 316.

⁴⁹ *Packwood-Magnuson Amendment to the Fishery Conservation and Management Act 1976*.

⁵⁰ K Gambrell, 'Clinton Skips Japan Sanctions', *United Press International*, (2000), 26/12, 1.

plight of the whale⁵¹. A strategy of “vote buying” from Japan⁵² almost overturned the moratorium in 2005/6, forcing through the St Kitts Declaration. The treaty has been on the verge of collapse for years⁵³, an intercessional meeting being held in London in March 2008 to decide on how to challenge the current impasse reached in the Convention.

ii. The Evolution of the Superwhale

The deadlock between the minority of nations that engage in the lethal exploitation of whale stocks and the majority who oppose any form of whaling. While initially scientific uncertainty was used by whaling nations to justify avoiding quotas⁵⁴, in the early 1970s a number of factors, including the decimation of Antarctic pelagic whale populations⁵⁵, led to the adoption of the moratorium⁵⁶. The moratorium was initially a temporary measure to allow the Scientific Committee to develop an effective regulatory regime and gather information on severely threatened species, but it has continued ever since. Heazle describes the process as the “evolution of the superwhale.”⁵⁷

⁵¹ Above n 27, 326.

⁵² A Gillespie, above n 7, 439.

⁵³ W Burke and M M R Freeman, above n 41, 187.

⁵⁴ M Heazle, above n 14, 178.

⁵⁵ M Heazle, above n 14, 77.

⁵⁶ M Heazle, above n 14, 144.

⁵⁷ M Heazle, above n 14, 133.

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The super whale is a term used by pro-whaling critics to describe the shift in attitudes, from whales as an exploitable stock to a non-human species entitled to rights⁵⁸. Most nations that chose to abandon whaling initially did so under pressure of powerful NGOs, who had begun to see whales as intelligent species requiring special protection⁵⁹. United States ambassadors have stated whales are uniquely special⁶⁰; the EU parliament has passed a resolution stating, “[w]hales are sentient mammals”⁶¹ and expressing its objection to any form of whaling⁶². The United Kingdom believes whale watching is “the only way to use whale resources sustainably.” Australia has made it clear it will not sanction a return to commercial whaling⁶³, the Latin America member states have reiterated a strong commitment and New Zealand has expressed its intention to keep a moratorium due to the current reality of world opinion⁶⁴. D’Amato and Chopra argue the dynamics of customary international law predict the eventual emergence of an entitlement custom, although this is unlikely given the clear and unambiguous objection of whaling nations⁶⁵. The Scientific Committee has advised a return to whaling since 1994 with the Revised Management Procedure setting out a scientific regulatory framework⁶⁶, yet despite being adopted this has not yet been implemented. Lethally utilizing whales is part of the culture of some Contracting Parties; they see the move in world opinion as inherently threatening and

⁵⁸ M Heazle, above n 14, 171.

⁵⁹ S Suhre, above n 15, 311; M Heazle, above n 14, 167.

⁶⁰ V Scheffer ‘The Status of Whales’ 29 *Pacific Discovery* 2, 8.

⁶¹ European Parliamentary Association, *Joint Motion for Resolution*, Document. EN/RE/228/228125 (1993).

⁶² A Gillespie, ‘The Ethical Question in the Whaling Debate,’ (1996) 9 *Georgetown International Law Review* 356, 369.

⁶³ S Suhre, above n 15, 313.

⁶⁴ A Gillespie, above n 62, 368.

⁶⁵ A D’Amato and S K Chopra, above n 17, 49.

⁶⁶ W Burke and M M R Freeman, above n 40, 2.

manifestly inconsistent with anti-whaling nation's attitude to other animals⁶⁷.

Furthermore the statements of those nations reflect the polarity in world opinion, Norway and Japan have referred to minke whales as the "rats"⁶⁸ and "cockroaches"⁶⁹ of the sea respectively.

iii. Justifying the Protection of the Superwhale

Whether a mere ideological ground forms sufficient justification for enforcing a culture's morals on another, or this constitutes a form of "cultural imperialism" is a significant question⁷⁰. Norway's cultural background recognizes whaling as an inherent part of community structure⁷¹, and its relatively small take the meat is usually used for human consumption⁷². Whale products are essential in many Japanese traditions.⁷³ Furthermore, several Norwegian fishermen lost their boats to the bank following the 1982 Moratorium decision, and Icelandic and Japanese based community whalers suffered significant financial setbacks⁷⁴. However, just because something is derived from within a culture does not make it ethically defensible⁷⁵. International legal institutions have condemned terrorism, slavery, cannibalism, infanticide, female circumcision, racism and sexism irrelevant of its place within a

⁶⁷ K Sumi, above n 40, 317.

⁶⁸ D MacKenzie. 'Norway Declares War on the Minke Whale,' (1994) *New Scientist* 13 (9).

⁶⁹ A Browne, 'Global Ban on Whaling Faces Its Severest Test.' (2001) *Guardian Weekly* July 26, 17.

⁷⁰ ⁷⁰ A Gillespie, above n 62, 373.

⁷¹ B T Hodges, above n 10, 313.

⁷² S Suhre, above n 15, 311; M Heazle above n 17, 167.

⁷³ K Sumi, above n 40, 318.

⁷⁴ W Burke and M M R Freeman, above n 40, 188.

⁷⁵ A Gillespie, above n 7, 375.

cultural setting⁷⁶. Where these activities do not occur within a country, but a communally managed area, there is an obligation to intervene⁷⁷. The condemnation of the international law must then logically extend to the harvesting of cetaceans, if considered ethically abhorrent to the extent of the other rules of universal morality. The primary defense of the pro-whaling nations, of any ethical standard regarding whales is comparing their treatment of other animals. Considering the continuing barbaric factory farming regimes in most countries, and the hunting traditions often resulting in significant pain for deer, pigs and the oft cited kangaroo, whether one can differentiate the whale must be the starting point. However, if one admits to an activity being unethical, the fact an accuser carries out a similarly unethical activity is no defense⁷⁸. Rather, a rational international society, in spirit, should attempt to eliminate all unethical practices.

It must be considered unethical to harvest something possessing a right to life⁷⁹. In the context of a historical widening of rights holders, including women, racial minorities, infants, insane, as well as corporations, trusts and other intangible legal bodies, there is nothing strange about recognizing the rights of whales⁸⁰. However, the philosophic recognition of non-human life under law has proved problematic. The position of non-human animals under the law has been a matter debated since classical time⁸¹ and, as

⁷⁶ Ibid, 376.

⁷⁷ A Gillespie, above n 7, 481.

⁷⁸ Ibid, 484.

⁷⁸ D Favre, 'Integrating Animal Interests into our Legal System.' [2004] 10 *Animal Law* 87, 89.

⁷⁹ A D'Amato and S K Chopra, above n 7, 50.

⁸⁰ C Stone, *Should Trees have Standing? Towards Legal Rights for Natural Objects* (1974), 3-6.

⁸¹ M A Violin, 'Pythagoras—The First Animal Rights Philosopher,' *Between the Species* 6:122-127; H D Guither, *Animal Rights: History and Scope*, (1997).

the legal philosopher Alan Watson has pointed out, “to an outstanding degree [the current] law is rooted in the past.”⁸² The prevailing welfare approach to the animal issue has been routinely criticised by animal rights proponents⁸³. It implicitly recognises interests in protecting animals against unnecessary suffering, but only in selected species, and only in certain circumstances⁸⁴. Popular opinion tends to follow such trends, outraged at the isolated mutilation of a puppy⁸⁵, but unmoved by similar cruelty against battery hens⁸⁶ and systematic mutilation, like the docking of puppies’ tails⁸⁷.

⁸² A Watson, *Legal Transplants: An Approach to Comparative Law*, (1993), 95.

⁸³ D Favre, above n 78; G L Francione, *Rain Without Thunder: The Ideology of the Animal Rights Movement* (1996); S M Wise, ‘A Review Commentary of Garry L. Francione’s *Rain Without Thunder: The Ideology of the Animal Rights Movement*’ (1997) 3 *Animal Law* 45; T Regan, *The Case for Animal Rights* (1984).

⁸⁴ The *Animal Welfare Act 1999* enacts the five freedoms (see page 8), but a defence to a breach of the five freedoms is compliance under a Code of Welfare prescribed by the act (Section 24). The Codes of Welfare vary according to animal, depending on what the panel decides.

⁸⁵ The case of Smokey, who had his ears chopped off by his owner for cosmetic reasons, caused significant public outrage: R MacBrayne, *Nation Takes Maimed Puppy to Its Heart*, *New Zealand Herald* A5 (2002) Aug 5 cited in P Sankoff, ‘Five Years of the ‘New’ Animal Welfare Regime: Lessons Learned from New Zealand’s Decision to Modernize It’s Animal Welfare Legislation,’ (2005) 11 *Animal Law* 7.

⁸⁶ Auckland Animal Action, *Battery Hen Farm Horror 2004*, <http://www.aucklandanimalaction.org.nz/> at 4 April 2007. Note: the footage shot failed to be published on a major news channel.

⁸⁷ Tail docking, involving either cutting or tightly banding the tail of a puppy, is usually performed for cosmetic reasons, ‘to maintain breed standards.’ (Council of Docked Breeds, ‘The Case for Tail Docking,’ <http://www.cdb.org/case4dock.htm> at 17 April 2007). The other cited reasons, to protect against tail injury or for hygiene, have been rejected by animal welfare organisations (Royal Society of the Prevention of Cruelty to Animals Australia *Why Dock Puppies Tails* <http://www.rspca.org.au/campaign/tail.asp> at 17 April 2007). It is extremely painful for the puppies, yet is still widely practised by breeders (where it is still legal). The reason breeders favoured docked dogs is discussed by Jane Turner in the Parliamentary Records, (7 Dec 2005) *Marriage (Gender*

Wise argues the reasons human's accept such fundamental discrepancies in their attitudes, is an entrenched belief in teleological anthropocentrism⁸⁸. The belief suggests the universe is designed to serve human beings, usually implying a benevolent creator⁸⁹. There is still a common perception that the human species is somehow, whether by evolutionary necessity or divine intervention, the peak and purpose of existence, and should be able to exploit non-human resources to the extent technologically possible. However, there is absolutely no evidence to support this claim. "The universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind pitiless indifference."⁹⁰ The teleological perspective is clear in those animal welfare positions

Clarification) Amendment Bill 673; suggesting it was initially a method of tax evasion, as longer tailed dogs were taxed at a higher rate.

⁸⁸ S M Wise, 'Legal Rights for Non Human Animals: The Case for Chimpanzees and Bonobos,' [1996] 2 Animal Law 179, 181; This concept illustrated in the attitude of the law towards animals: In the 3rd or 4th century AD, the Roman jurist Hermogenianus wrote "All law was established for men's sake" (S M Wise 'Animal rights,' (2007) in *Encyclopaedia Britannica Online* <http://www.britannica.com/eb/article-257089> at 30 January 2008). In 1966, P.A. Fitzgerald's treatise *Salmond on Jurisprudence* declared a similar proposition, "the law is made for men and allows no fellowship or bonds of obligation between them and the lower animals." S M Wise, *ibid*.

⁸⁹ See for example: The King James Version of the Bible; Genesis 1.26, where God gives dominion to However, there have been secular approaches that have also embraced a purpose driven universe: Social Darwinism, originally proposed by Herbert Spencer in *Progress: Its Law and Cause* (1857), reasoned by analogy from the biology of Lamarck and the positivist approach, that evolution progresses along a single path, progressing steadily upwards, ultimately heading towards a perfect society. Those who flourish in society do so by natural processes; those who are weak, are naturally that way. Using such justification the universe intended the possession of power, and those who possess it should use it as they deem appropriate: G Jones, *Social Darwinism and English Thought: the Interaction between Biological and Social Sciences*, (1980).

⁹⁰ R Dawkins, *River Out of Eden: A Darwinian View of Life* (1995), 16.

that are not based on any good to the animal, but rather the harm abusive animal practises may have on humans⁹¹.

The major debate in the animal rights field arises round the “argument from marginal cases.” The contractual nature of relationships between rights bearers might deny a cetacean any rights to life. However, if there is a certain quality that allows one entrance into the community of equals, humans that do not possess that quality could be harvested.⁹² Cohen believes we should analyze species normatively, so such issues do not arise⁹³. That is, analyze humans according the usual baseline of cognitive aptitudes, rather than “the marginal cases”. Nevertheless, some species clearly exhibit understanding of contractual relations⁹⁴ and one should not ignore marginal cases, just because they are morally troublesome. Certainly where an animal is particularly intelligent and clearly exhibits behaviour in advance of a severely mentally disabled person, there should be some obligation to treat the animal with some higher level of respect. Given the inconsistencies within most societies treatment of animals, one

⁹¹ For example: “...so far as animals are concerned, we have no direct duties. ... Our duties towards animals are merely indirect duties towards humanity...If a man shoots his dog because the animal is no longer capable of service, he does not fail in his duty to the dog, ... but his act is inhuman and damages in himself that humanity which it is his duty to show towards mankind. ... We can judge the heart of a man by his treatment of animals....” I Kant, *Groundwork of the Metaphysics of Morals*, (1785), 205-6; also see P Carruthers, *The Animals Issue: Moral Theory in Practice*, (1992), 90-2.

⁹² See P Singer, ‘The Argument from Marginal Cases’ in *Animal Liberation*, (1975).

⁹³ C Cohen, ‘The Case for the Use of Animals in Biomedical Research,’ (1986) *New England Journal of Medicine* 315, 317.

⁹⁴ P Masserman, S Wechkin and W Terris, ‘Altruistic Behaviours in Rhesus Monkeys,’ (1964) *The American Journal of Psychiatry* 121 (Rhesus monkeys will avoid food, if it prevents their group members being electro-shocked), 584; J McClintock, ‘BAYWATCH - bottlenose dolphins research,’ (2000) *Discover* 3 (Bottle-nose dolphins form complex alliances, and pods often form punishments for breaking alliances).

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must posit whether one should infer ethical principles from society's values or from a fundamental axiom, such as utility. It is beyond the scope of essay to give this subject suitable analysis, but the very fact these issues are not addressed in a substantive way in any forum, while justifying a number of states conduct, illustrates the real difficulty with the whaling commission.

For the regulation of whale watching this proves a challenge. Pro-whaling nations see the regulation of whale watching as a ploy employed by anti-whaling nations to circumvent the purposes of the ICRW⁹⁵. Japan views whale watching as outside the competence of the IWC, and “urged that the limited resources be used on what it considers to be the primary functions of the organisation.”⁹⁶ The overtly polemic nature of the assembly makes any consensus decision making virtually impossible. The ICRW is primarily concerned with fishing, not non lethal exploitation. The whale watching sub-committee of the Scientific Committee is very efficient, and has achieved a lot in coordinating and directing research⁹⁷. However, the ICRW is a fishing regulatory agreement, and is built to accommodate those regulations. To utilize it to regulate whale watching is necessary where there is no other form of international structure, but it is necessarily limited by the nature of the instrument and the political dynamics of the organization. Furthermore, any other instrument can form complimentary provisions, without needing to directly compete. The Protocol on Environmental Protection to the Antarctic Treaty explicitly notes it does not derogate from the rights and obligations within the ICRW

⁹⁵ Aron W, Burke W and Freeman M M R, above n 40, 188.

⁹⁶ IWC, above n 3.

⁹⁷ IWC ‘Report of the Scientific Committee.’ IWC XXX Meeting (2007), IWC/59/Rep 1.

C. The Environmental Protocol: A more appropriate system

However, it is a far more appropriate instrument for regulating whale watching activities in the Southern Ocean. The Protocol on Environment Protection to the Antarctic Treaty broadly regulates all activities within the Antarctic Treaty area (south of 60° latitude). “Convinced by the need to enhance protection of the Antarctic environment and associated ecosystems,”⁹⁸ the EP sets out new principles declaring “the protection of the environment and dependent and associated ecosystems, and the intrinsic value of Antarctica, including its wilderness and aesthetic values...fundamental considerations in the planning of conduct of all activities in the Antarctic Treaty Area.”⁹⁹ To achieve this end, activities must be planned to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems, and in particular, to avoid detrimental impacts in the distribution, abundance or productivity of species of populations of species of fauna and flora.”¹⁰⁰

The development of the Environmental Impact Assessment system emerged in 1987 at the XIV Antarctic Treaty Consultative Meeting. Parties adopted two Recommendations: XIV-2 Human Impact Assessment; and XIV-3 Human Impact on the Antarctic Environment: Safeguards for Scientific Drilling¹⁰¹, effectively instituting pre-evaluations of environmental impacts where the activity might have a significant impact. However, when France built a hard rock airstrip, involving substantial terrain modification and the devastation of local biota, it became clear the

⁹⁸ Madrid Protocol, Preamble.

⁹⁹ Madrid Protocol, Article 3.

¹⁰⁰ Madrid Protocol, Article 2.2.1.

¹⁰¹ Antarctic Treaty Consultative Meeting (ATCM), *Final Report of the Fourteenth Antarctic Treaty Consultative Meeting* (1987).

Recommendations were not being implemented universally by State parties¹⁰². Driven by the awareness of severe risks to the Antarctic environment, the Protocol drastically changed the nature of State obligations under the Treaty System.

An EIA must be fulfilled on all activities, fulfilling a significant analysis of the activity and the surrounding impacts¹⁰³. Before any activity takes place a Preliminary Assessment (PA) must establish whether proposed activities have a “less than a minor or transitory impact”¹⁰⁴. The PA is left entirely to appropriate national procedures, without need to produce a formal document or account in any way for the decision making process¹⁰⁵. However, if the activity does have a “minor or transitory impact”, they must be evaluated under Annex I of the Protocol.

An Initial Environmental Evaluation¹⁰⁶ must describe the proposed activity, including its purpose, location, duration and intensity; consider the alternatives and impacts of the activity and known existing and planned activities. If this evaluation indicates the activity will only have a minor or transitory effect, it may continue given appropriate procedures, which may include monitoring are put in place¹⁰⁷. This definition has been updated and concisely placed within a set of guidelines in the Committee of Managers of National Antarctic Programs (COMNAP). One must define the activity,

¹⁰² A D Hemmings and R Roura, above n 11, 13.

¹⁰³ See Figure 3.

¹⁰⁴ Madrid Protocol, Article 8.1.

¹⁰⁵ A D Hemmings and R Roura, above n 11, 15.

¹⁰⁶ Hereafter IEE.

¹⁰⁷ Madrid Protocol, Annex I, Article 2.2

alternatives to the activity, identify output and exposures¹⁰⁸, evaluate impacts, and identify mitigation and remediation¹⁰⁹ measures.

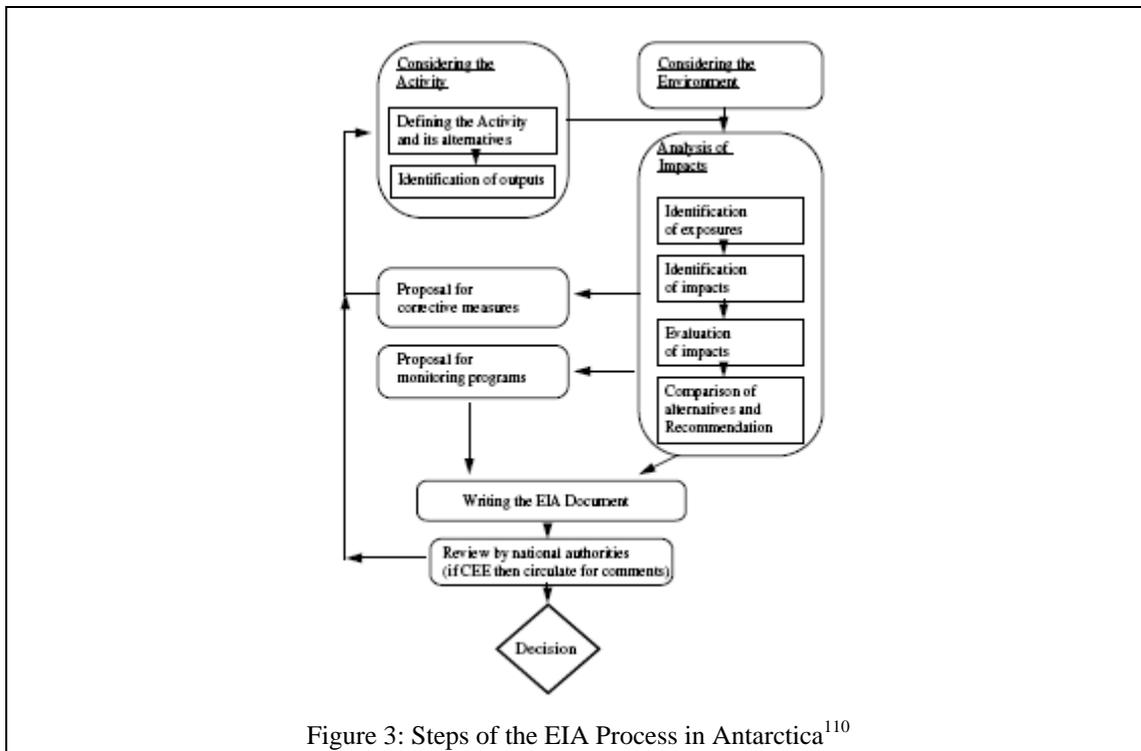


Figure 3: Steps of the EIA Process in Antarctica¹¹⁰

If there is more than a minor or transitory impact, a Comprehensive Environmental Evaluation¹¹¹ must be prepared¹¹². This includes a more stringent examination of impacts, mitigation measures and indirect effects even on other research¹¹³. It must be made publically available, and give 90 days for submissions. Before the activity is engaged in, it must also be discussed an Antarctic Treaty Consultative Meeting, upon

¹⁰⁸ “The process of interaction between an identified potential output and an environmental element or value.” Council of Managers of National Antarctic Programmes (COMNAP), *Practical Guidelines for Developing Environmental Monitoring Programmes in Antarctica* (2005) 28ATCM-WP026, 12.

¹⁰⁹ “...steps taken after impacts have occurred to promote, as much as possible, the return of the environment to its original position.” Ibid, 15.

¹¹⁰ Ibid.

¹¹¹ Hereafter CEE.

¹¹² Madrid Protocol, Annex I, Article 3.1.

¹¹³ See Appendix II.

which point a final Comprehensive Environmental Evaluation prepared and circulated.

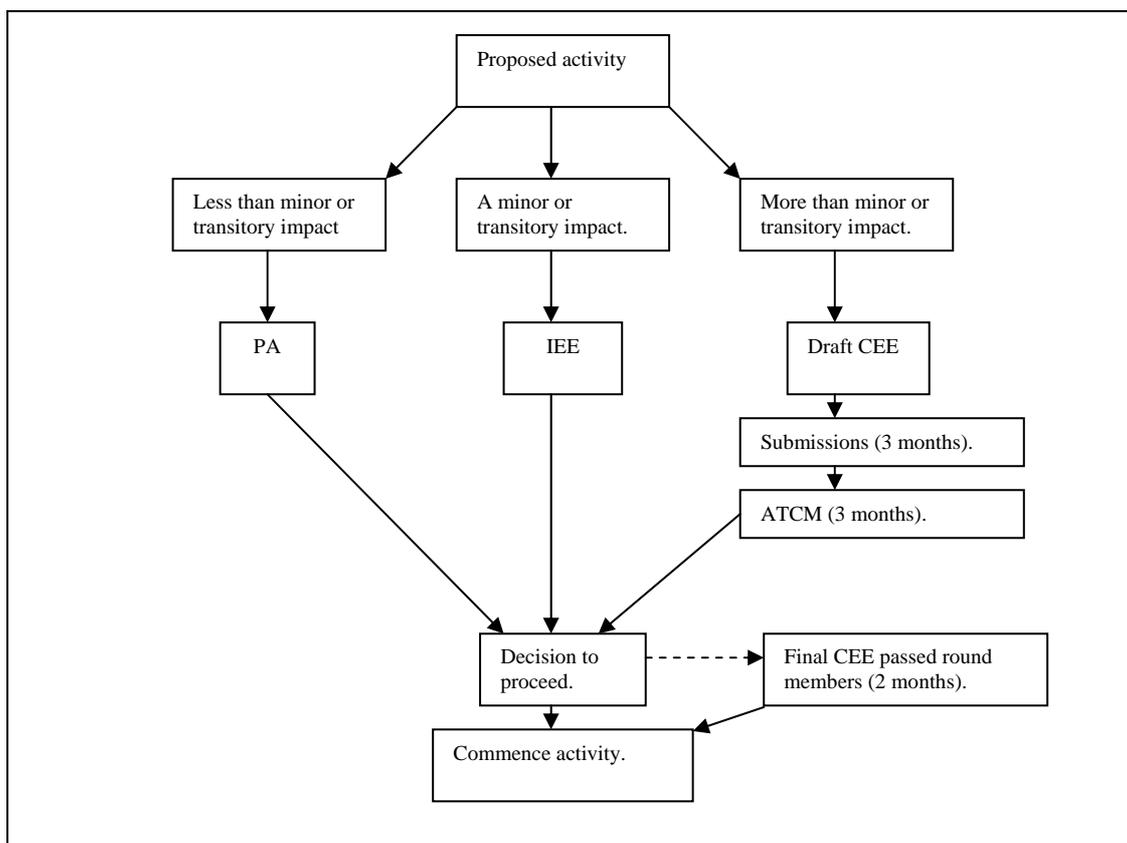


Figure 4: Environmental Impact Assessment under the Protocol on Environmental Protection to the Antarctic Treaty.
 Key: PA: Preliminary assessment, IEE: Initial Environmental Evaluation, CEE: Comprehensive Environmental Evaluation.

Recommendation XVIII-1 from the 1994 Antarctic Treaty Meeting lays out Guidelines for those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic. As well as reiterating the requirements under the Protocol and by national law, the Parties recommend “[organisers and operators] should abide by the requirements imposed on organisers and operators under the Protocol on Environmental Protection and its Annexes, in so far as they have not been implemented in national law.” This creates an important impetus on tourism operators to engage in prior notification, assessment, provision for emergencies, respect flora, fauna and the inherent value of the continent, and prevent the discharge of prohibited

waste.¹¹⁴ The International Association of Antarctic Tourist Operators does not require its members to undertake Environmental Impact Assessments, although does demand adherence with local law procedures and mandatory analogous requirements¹¹⁵. Part of the Members Mandatory procedures are IAATO's Marine Wildlife Watching Guidelines.

3. Assessment of Current Regulation

A. Why Whale Watching needs Regulation.

Garret Hardin's famous essay, "The Tragedy of the Commons" describes the principal dynamics of how resources managed cooperatively can be abused¹¹⁶. A typical village green in an English village open for use by the community is able to sustain cattle herds for years. Populations then increase and individuals rationally wish to maximise their gain. Inevitably, the common resource is destroyed through overuse. This model has been criticised on several grounds and anthropologists have demonstrated that in most places there are social and cultural factors that preclude the onset of the tragedy of the commons¹¹⁷. Non-lethal exploitation of whale populations is cited as an example of a truly sustainable use of a commons resource.

¹¹⁴ J D Hanson and J E Gordon. 'Antarctic environments and resources: A geographic perspective.' (20th ed.) 1998.

¹¹⁵ For a complete list of obligations see Appendix III.

¹¹⁶ G Hardin. 'The Tragedy of the Commons.' (1968) *Science* 162.

¹¹⁷ K Neves-Graça, 'Revisiting the Tragedy of the Commons : Ecological Dilemmas of Whale Watching in the Azores,' (2004) *Human Organisations* 63 (3).

Lethal whale exploitation certainly forms a case in point, despite a regulatory framework, Antarctic baleen whale populations were pushed till they were no longer profitable and near extinction¹¹⁸. However, non lethal exploitation can also have significant effects on populations. In Lajes do Pico¹¹⁹ open access to sperm whales for 100 years did not lead to overexploitation due to “artisan methods of hunting as well as a finite capacity to process and export whale-derived products.”¹²⁰ With the dissolution of the whaling industry, whale watching companies began to emerge in the region and without regulation, seriously threatening the whale populations¹²¹. Non-lethal exploitation can have demonstrable long term and short term effects on whales. Unfortunately, current assessment techniques are not sufficient to understand impacts of whale watching on cetaceans¹²². The difficulty and cost of engaging in cetacean research is a limiting factor. These limitations mean little is known about the behaviour of cetaceans and what cues cause distress and harm to individuals and populations¹²³. Studies into short term impacts are often used as a “best-guest proxy” for long term costs, in the absence of quantitative studies into the subject¹²⁴. However, the whale watching working group to the Scientific Committee of the International Whaling Commission has been active in encouraging and compiling research¹²⁵.

¹¹⁸ M Heazle, above n 14, 105

¹¹⁹ Azores, Portugal.

¹²⁰ K Neves-Graça, above n 117.

¹²¹ *Ibid*, 290.

¹²² L Bejder and A Samuels, above n 13, 230.

¹²³ *Ibid*, 242.

¹²⁴ *Ibid*, 240.

¹²⁵ *Ibid*, 231.

i. Impacts of Tourism on Cetaceans.

a. **Proximity**

The most obvious negative impact of tourism is mortality as a result of collision. This is rare¹²⁶, but there have been some reported collisions with humpback, fin and minke whales¹²⁷. IAATO has noted one or occasionally two reported incidents of ship strikes per season, primarily involving humpback whales, but none involving a fatality¹²⁸. Nevertheless, the last Scientific Committee Report noted a significant increase in some areas for whale collisions¹²⁹ and 62 accounts of whale-vessel collisions in Alaska of which 6 were dedicated whale watching vessels, with several others probably engaged in whale watching activity¹³⁰. However, exposure to ecotourism may have cumulative effects¹³¹ and these may decrease survival, reproductive success and population dynamics¹³². Specific geographical areas have become renowned for certain species and are regularly visited by cruises¹³³. Effectively, various activities are seen to disturb cetaceans and these have been examined as well as the cetacean's reactions to the activities.

¹²⁶ Ibid, 240.

¹²⁷ Ibid.

¹²⁸ R Williams and K Crosbie, above n 12.

¹²⁹ SC/59/BC14. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).; although the increase may be a result of increased awareness due to education and local awareness campaigns and may include more minor "bumps."

¹³⁰ SC/59/BC16. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹³¹ D A Duffus, and P Dearden. 'Non-consumptive wildlife-oriented recreation: a conceptual framework' (1990) *Biological Conservation* 53.

¹³² L Bejder and A Samuels, above n 13, 240.

¹³³ IAATO Antarctic Whales, 1.

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Differences in surfacing, ventilation and dive patterns are amongst the clearest impacts of whale watching. Whale blow intervals and aerial behaviour increase with the number of whale watching boats¹³⁴. Female dolphins without calves and inexperienced mothers tended to have fewer intervals between breaths presumably corresponding to a higher probability of being struck¹³⁵. Fin whales have also displayed reduced dive duration and breaths per surfacing in the presence of whale watching vessels¹³⁶.

Researchers have also determined significant effects on swim speed, course and orientation as excellent measures of avoidance behaviour. One study noted after 70 minutes, Hector's dolphin groups tended to orient away from vessels more and more¹³⁷, after initially orienting towards and another study recorded killer whales tended to speed away from vessels¹³⁸. Increased numbers of whale watching vessels led to some dolphins increasing non-directional movement and 'tail out' dives¹³⁹.

¹³⁴ SC/59/WW9. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹³⁵ D P Norwaek, P L Tyack., and R S Wells, 'Short term effects of boat traffic on bottlenose dolphins, *Tursiops truncatus* in Sarasota Bay, Florida.' (2001) *Marine Mammal Science* 17.

¹³⁶ G S Stone, and A Yoshinaga, 'Hector's dolphin *Cephalorhynchus hectori* calf mortalities may indicate new risks from boat traffic, and habituation.' (2000) *Pacific Conservation Biology* 6.

¹³⁷ L Bejder, S M Dawson, and J Harraway, 'Responses by Hector's dolphins to boats and swimmers in Porpoise Bay, New Zealand.' (1999) *New Zealand Journal of Marine and Freshwater Research* 35.

¹³⁸ R M Williams, A W Trites, and D E Bain. 'Behavioural responses of killer whales (*orcinus orca*) to whale-watching boats: opportunistic observations and experimental approaches.' (2002) *Journal of Zoology (London)* 256.

¹³⁹ SC/59/WW1. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

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The presumption that cetaceans will bunch together in situations of surprise, threat or danger¹⁴⁰ has led some researchers to analyse group cohesiveness as a measure of disturbance. It is evident dolphins bunch together more tightly when whale watching vessels are in the proximity¹⁴¹. Furthermore, the direction a vessel approaches can increase group cohesion, especially among groups of dolphins with calves¹⁴².

Repeated distractions are also likely to affect the amount of time cetaceans spend on essential activities, such as reproduction, feeding, socialising, and resting¹⁴³. Dolphins tended to spend much more time with humans after repeated exposure¹⁴⁴, less time with their calves¹⁴⁵, less time feeding, resting¹⁴⁶ and socialising¹⁴⁷. However, whale watching is unlikely to effect calf survival, strong maternal fidelity superseding any effect of displacement for humpback whales¹⁴⁸. A recent study noted whales abandoning feeding routines in more intrusive interactions¹⁴⁹. Where the tourist

¹⁴⁰ C M Johnston and K S Norris. 'Delphinid social organisation and social behaviour.' In R J Schusterman, J A Thomas and F G Wood (eds.) *Dolphin Cognition and Behaviour: A Comparative Approach*. (1986).

¹⁴¹ L Bejder, S M Dawson, and J Harraway, above n 137;

S M Nowacek, R S Wells and A R Solow. 'Short-term effects of boat traffic on bottlenose dolphins, *Tursiops truncatus*, in Sarasota Bay Florida.' (2001) *Marine Mammal Science*, 17.

¹⁴² SC/59/WW1. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁴³ Known as the "behavioural budget."

¹⁴⁴ A Samuels, and L Bejder. 'Habitual interaction between humans and wild bottlenose dolphins (*Tursiops truncatus*) near Panama City Beach, Florida.' (1998). Marine Mammal Commission.

¹⁴⁵ J Mann and B Smuts. 'Behavioral development in wild bottlenose dolphin newborns *Tursiops* sp.' (1999) *Behaviour* 136.

¹⁴⁶ SC/59/WW20. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁴⁷ R Constantine and C S Baker. 'Monitoring the commercial swim-with-dolphin operators in the Bay of Islands, New Zealand.' (1997) Department of Conservation.

¹⁴⁸ SC/59/WW23. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁴⁹ SC/59/WW24. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

activity actively replaces feeding activity, through feeding dolphins for example, studies have shown a significantly lower calf survivorship¹⁵⁰.

The movement of vessels can also influence habitat choice. Dolphins have also been shown to change habitat preference in response to vessel traffic¹⁵¹. Killer whales have been shown to move to another area or abandon a habitat in the presence of vessels¹⁵².

Dolphins have been seen to abandon areas when human swimming increases¹⁵³.

Making causal and not correlative links are difficult in this area. A study showed whales reduced usage of a bay compared with pre-tourism numbers but urged caution in interpretation due to the possibility of ecological change or changes in population structure¹⁵⁴.

In the last Scientific Committee Report, two companion papers¹⁵⁵ reported on a more substantive study examining boat traffic on killer whales. Time foraging reduced as the distance between vessels and whales increased. Number and proximity of vessels related to active behaviour, path deviation, speed, respiration and surface area displays. The high proximity of time spent in proximity to vessels raises the

¹⁵⁰ J Mann, R C Conner, L M Barre, and M R Heithaus. 'Female reproductive success in bottlenose dolphins.' (2000.) *Tusiops* sp. *Behaviour* 136.

¹⁵¹ M C Allen, and A J Read. 'Habitat selection of foraging bottlenose dolphins in relation to boat density near Clearwater, Florida.' (2000) *Marine Mammal Science* 16, 815-824.

¹⁵² SC/59/WW14. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁵³ SC/59/WW1. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁵⁴ A Forest, 'The Hawai'ian spinner dolphin, *Stenella longirostris*: effects of tourism.' (2001) M.Sc thesis, Texas A&M University.

¹⁵⁵ D E Bain, D Lusseau, R Williams and J C Smith, 'Vessel traffic disrupts the foraging behaviour of southern resident killer whales (*Orcinus* sp.)' (2007) *Marine Ecology Progress Series*; D E Bain, R Williams., J C Smith, and D Lusseau. 'Effects of vessels on behaviour of individual southern resident killer whales (*Orcinus* sp.)' (2007) SC/59.

possibility of biologically significant consequences. However, the Scientific Committee noted it is unclear whether these effects are driven by acoustics or boat behaviour¹⁵⁶.

The various avoidance strategies employed have energetic costs. For example, some cetaceans try to avoid boats through non-conventional movement and this has been shown to result in 13-17% further travel¹⁵⁷. Some are sceptical to the significance of the increase in activity¹⁵⁸, but the consequences have not been examined in any real detail.

b. Noise pollution

Marine mammals undoubtedly hear man-made noises¹⁵⁹. Cetaceans rely on sound for navigation, communication and locating predators and prey¹⁶⁰. Tourism is the largest contributor to vessel traffic and ship noise in the Southern Ocean. Given the ships focus on certain areas where whales have been observed in the past¹⁶¹, the cumulative impacts of sound pollution are very relevant. Since the 1970s, concerns about the effect of man made noise on cetacean populations have manifested in substantial

¹⁵⁶ SC/59. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007), 8.

¹⁵⁷ Ibid.

¹⁵⁸ W J Richardson, C R Greene Jr., C I Malme and D H Thomson, *Marine Mammals and Noise* (1996).

¹⁵⁹ Ibid.

¹⁶⁰ R McCauley and D Cato, 'Acoustics and marine mammals: Introduction, importance, threats and potential as research tool,' in N Gales, M Hindell, R Kirkwood (eds.), *Marine Mammals: Fishing Tourism and Management Issues* (2003), 344.

¹⁶¹ Williams R and Crosbie K, above n 12, 1.

programs of research, workshops and regulatory agencies¹⁶². Sound-induced effects range from no direct effect, adverse effects on prey species, masking of signals of interest, behavioural responses, temporary and permanent shifts in animals hearing ability, and direct damage to hearing and other organs¹⁶³.

There are significant within and between species differences in behavioural response thresholds when marine mammals are exposed to man made noise. There does not appear to be clear criteria of disturbance. Certainly, as with proximity issues, isolated disturbance incidents are unlikely to have significant effect unless extreme in nature¹⁶⁴. Large scale military operations have been linked to mass stranding events and decompression type sickness but no causal relationships have been identified¹⁶⁵. Marine mammals have characteristics that allow them to cope with limited exposure to man-made-noise, including the use of short-term avoidance reactions and habituation, discussed below.

Short term changes in vocal activities are sometimes ascribed to anthropogenic intervention. Vessels approaching beluga whales changed vocal responses significantly; inducing longer call duration, changes in rates of calls, an upward shift in the frequency range and a tendency to emit calls repetitively¹⁶⁶. Communication

¹⁶² W J Richardson, C R Greene Jr., C I Malme and D H Thomson, above n 158, xiii.

¹⁶³ R McCauley and D Cato, above n 160.

¹⁶⁴ W J Richardson, C R Greene Jr., C I Malme and D H Thomson, above n 158, 333.

¹⁶⁵ K N Scott, 'Sound and Cetaceans: A Regional Response to Regulating Acoustic Marine Pollution,' (2007) *Journal of International Wildlife and Policy*, 10.

¹⁶⁶ V Lesange, C Barrette, M C S Kingsley, and B Sjare. 'The effect of vessel noise on the vocal behaviour of belugas in the St. Lawrence River estuary, Canada.' (1999) *Marine Mammal Science* 15.

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was delayed in humpback whales upon sight of whale-watching vessels and sound playbacks have been shown to drastically change the nature of their songs¹⁶⁷.

Background ambient noise can often mask the ability of an animal to detect a sound¹⁶⁸. As cetaceans usually rely on sound to detect each other, predators and prey, an increased “spectrum level” based on the amount of noise energy at each frequency can dilute their ability to echolocate¹⁶⁹. The dominant background noise may be highly directional, reducing the masking effects of the noises. This is again an area that has been largely unstudied and requires more data to make any definite conclusions¹⁷⁰. However, considering studies have shown whale response to acoustic stimuli for tens of kilometres¹⁷¹, it is unlikely having boats stop a certain way away from the whale will influence too significantly any acoustic damage¹⁷².

¹⁶⁷ P J O Miller, N Biassoni, A Samuels, and P L Tyack. ‘Whale songs lengthen in response to sonar.’ (2000.) *Nature* 405, 409.

¹⁶⁸ V Lesange, C Barrette, M C S Kingsley, and B Sjare, above n 166.

¹⁶⁹ *Ibid*, 232.

¹⁷⁰ *Ibid*, 236.

¹⁷¹ D Au, and W Perryman, ‘Movement and speed of dolphin schools responding to an approaching ship.’ (1982) *Fishery Bulletin* 80; W K Richardson, M A Franker, B Wursig, and R Wells. ‘Behaviour of Bowhead whales (*Baleaena mysticetus*) summering in the Beaufort sea: reactions to industrial activity.’ (1985) *Biological Conservation* 32; S Baker and L M Herman, ‘Behavioural responses of summering humpback whales to vessel traffic: experimental and opportunistic observations.’ (1998) United States Department of the Interior National Park Service.

¹⁷² W J Richardson, C R Greene Jr., C I Malme and D H Thomson, above n 158, 333.

McCauley¹⁷³ examined the factors affecting noise levels produced by small whale watch vessels. The noise impact appeared to be as much related to the change in noise, especially as an increase, as to the steady noise levels.

c. Habituation

More long term effects on whale populations are difficult to determine due to the inherent difficulties with measuring animals that are often rather large and live in a significantly different habitat from the one we inhabit. There has been speculation as to the male humpback singing longer songs during exposure to man-made sound, which may cost reproduction but there are significant difficulties in obtaining data to test this hypothesis¹⁷⁴. Studies have shown almost a decade of data is required to detect demographic responses¹⁷⁵ and the paucity of data means no baseline can be reasonably determined¹⁷⁶

Habituation is defined as a gradual weakening of the behavioural response to a recurring stimulus that provides no apparent reward or punishment¹⁷⁷. This can cause

¹⁷³ R D McCauley., D H Cato and A F Jeffery. 'A study of the impacts of vessel noise on humpback whales in Hervey Bay,' (1996) Report for the Queensland Department of Environment and Heritage, Maryborough Office, from the Department of Marine Biology, JCU.

¹⁷⁴ P J O Miller, N Biassoni, A Samuels, and P L Tyack. 'Whale songs lengthen in response to sonar.' 2000 *Nature* 405.

¹⁷⁵ A Branao, D S Butterworth, and P B Best, 'Monitoring the long-term effects of boat-based whale watching on whales: testing the power of an existing time series the detect trends in demographic parameters on Southern Right Whales.' (1999). *IWC Scientific Committee Report, SC/52/WW14*; B Wilson., P S Hammond and P M Thompson. 'Estimating size and assessing trends in a coastal bottlenose dolphin population.' 1999 *Ethical Applications* 9.

¹⁷⁶ L Bejder and A Samuels, above n 13, 244.

¹⁷⁷ M Allaby, *A dictionary of zoology*. (1999).

problems in tourism, where animals become desensitised to a boat's presence and may be more vulnerable to vessel strikes¹⁷⁸. Conversely, some animals can become sensitised to stimuli increasing their reaction with repeated exposure¹⁷⁹. This may disrupt natural life patterns in some areas and can have severely negative long term effects on populations. Over time, dolphin populations have been seen to drop away with chronic exposure. Humpback whales show initial avoidance, and then curious responses; conversely minke whales have been shown to show curious followed by avoidant¹⁸⁰. Recently, the liberal use of the term habituation and sensitisation has been criticised due to its colloquial usage. There are several mechanisms by which tolerance levels can arise and by which habituation and sensitisation-type responses can arise. A standardised approach to both the classification and study of the phenomenon has been established¹⁸¹.

Another recent issue is the occurrence of more and more “solitary, sociable” dolphins¹⁸². These are habituated dolphins who seek out human interaction and do not interact with a pod. At least 70 have been identified worldwide¹⁸³. Metaanalysis has determined habituation puts the animals at risk and often occurs through considerable effort on the part of the humans¹⁸⁴. However, most swim-with dolphin situations did

¹⁷⁸ A Samuels, L Bejder, and S Heinrich.. ‘A review of the literature pertaining to swimming with wild dolphins.’ 2000 Marine Mammal Commission.

¹⁷⁹ M Allaby, above n 177.

¹⁸⁰ W A Watkins, ‘Whale reactions to human activities in Cape Cod waters.’ (1986) *Marine Mammal Science* 2.

¹⁸¹ SC/59/WW2. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁸² SC/59/WW10. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

¹⁸³ *Ibid*.

¹⁸⁴ A Samuels, L Bejder, R Constantine, and S Heinrich, ‘Swimming with wild cetaceans, with a special focus on the southern hemisphere,’ in N Gales, M Hindell, R Kirkwood (eds.), *Marine Mammals: Fishing Tourism and Management Issues* (2003).

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not involve habituated animals; usually due to the infrequency of encounters¹⁸⁵.

Furthermore, there have been no identified solitary, sociable dolphins in the Southern Ocean¹⁸⁶.

<p><u>Demography</u></p> <ul style="list-style-type: none">• Ship strike mortality• Wounds• Changes in reproductive rate• Survivorship of calves/adults• Changes in population trend <p><u>Behaviour</u></p> <ul style="list-style-type: none">• Avoidance behaviour• Attraction Behaviour• Deflection of migration• Surface-ventilation-dive characteristics• Surface-active behavioural events• Swimming behaviour and direction• Foraging• Rest time• Reproductive behaviour<ul style="list-style-type: none">○ Mating○ Parental care• Social behaviour• Within-school spacing and cohesion of animals	<p><u>Energetics</u></p> <ul style="list-style-type: none">• Energetic demands• Activity states• Swim speed• Foraging success• Body condition <p><u>Physiology of stress</u></p> <ul style="list-style-type: none">• Stress induced changes in reproductive hormones• Body condition <p><u>Acoustics</u></p> <ul style="list-style-type: none">• Noise related threshold shifts in hearing (habituation).• Masking• Changes in sound production <p><u>Displacement</u></p> <ul style="list-style-type: none">• Displacement from habitat
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Figure 5: Summary of Changes in Cetacean Behaviour or Activity from IWC Whale Watching Workshop Appendix 3 Table 2 (1994).

B. Guidelines

i. International Whaling Commission

The 1996 Resolution on Whale Watching set the scene for the IWC's involvement in whale watching as a sustainable use of cetacean resources. It "[recognises] the need for precautionary measures to ensure that the continuing development and expected expansion of whale watching activities do not adversely affect cetacean populations, individual animals, or their environment, or significantly increase the risk to the

¹⁸⁵ Ibid.

¹⁸⁶ Ibid.

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survival or ecological functioning of such populations; so considers “that the IWC has a continuing part to play in monitoring and providing guidance on the sustainable development of whale watching.” Priorities for future research were identified¹⁸⁷, and in 2004, a workshop reviewed available scientific and management tools for regulating whalewatching.

1. A more detailed review of the approach distances, effort and activity limitations in place in existing operations for a range of species and information on the basis for such controls.
2. An assessment of current studies of the effects of different approach distances and platforms¹⁸⁸.
3. A review of the qualitative methods used to assess the short-term reactions of cetaceans and the basis of judgements of adverse effects.
4. Comparative studies on different approaches/distances and other controls which may be required on areas important for feeding, resting and reproduction.

Figure 6: Priority Topics established by the *IWC Workshop on Whalewatching* (1996)¹⁸⁹

In the meeting, it was agreed scientific management is necessarily iterative activity, requiring adaptive rules¹⁹⁰. To do so it evoked the precautionary principle and the framework codified in the FAO Code of Conduct for fisheries. The precautionary principle emerged from inter-ministerial conferences on marine pollution in the

¹⁸⁷ Figure 4.

¹⁸⁸ Any vessel (with or without engine), aircraft or person in the water.

¹⁸⁹ <http://www.iwcoffice.org/conservation/whalewatching.htm#workshops> at 8 February 2008.

¹⁹⁰ *IWC Workshop on Whalewatching* (1996)

http://www.iwcoffice.org/_documents/sci_com/workshops/WW_Workshop.pdf at 8 February 2008, 6.

1980s, and has been applied in many examples of areas of environmental concern¹⁹¹.

In essence, it advises a cautious approach to exploitation in areas of scientific uncertainty and threats of serious or irreversible damage¹⁹².

The framework is established three reference points: a target reference point (TRP) describing the ideal situation, a limit reference point (LRP) describing the point where activity becomes unacceptable, and a precautionary reference point (PRP) that assesses the most reasonable point between the two. The TRP in all whale watching endeavours is recovery of population to preexploitation level, no anthropogenic mortality, no increase in energetic demand no displacement from core areas, and no reduction in the energy acquisition of individuals¹⁹³. The PRP should consist of a reasonable assessment of the degree of risk that will be acceptable given the socio-economic and political situation, scientific uncertainty about the impacts of all anthropogenic activity. The final standard, the LRP must trigger the implementation of urgent managerial actions to mitigate the environmental damage.

Scientists should provide advice on defining reference points, critical parameters to measure and techniques to monitor when a system is on a scale between the TRP and LRP through expanding current data sets. The impacts of interactions depends on

¹⁹¹ D Freestone, 'International Fisheries Law Since Rio: The Continued Rise of the Precautionary Principle' in A Boyle and D Freestone (eds.) *International Law and Sustainable Development: Past Achievements and Future Challenges* (1999), 163.

¹⁹² Principle 15 of the UNCED 1992 – The Rio Declaration – “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.” Report of the United Nations Conference on Economic Development. *Annex I: Rio Declaration on Environment and Development*. (1992)

¹⁹³ *IWC Workshop on Whalewatching*, above n 190, 6.

their characteristics and each management measure must isolate the appropriate characteristic¹⁹⁴. Duration of encounter, vessel type, vessel activity, number of commercial operators and the maximum number of interactions ecologically sustainable in an area¹⁹⁵, are characteristics identified by the Scientific Committee as relevant. The workshop included gaps in scientific knowledge¹⁹⁶, possible management options to minimise or eliminate impacts of whale watching for each critical response variable¹⁹⁷, and scientific methods to examine the critical parameters¹⁹⁸.

The IWC Guidelines set out the general principles to minimise the risk of adverse impacts of whale watching¹⁹⁹. These are categorised into three groups: managing the development of whalewatching to minimise the risk of adverse impacts; designing, maintaining and operating platforms to minimise risk of adverse effects on cetaceans, including disturbance from noise; and allowing the cetaceans to control the nature and duration of the activity.

¹⁹⁴ Ibid, 8.

¹⁹⁵ In Fiordland, New Zealand, once 900 trips were taken per season, the average amount of time spent with dolphins did not increase. This is because dolphins were dispersed by the increased traffic. D Lusseau, 'The hidden costs of tourism: Effects of interactions with tour boats on the behavioural budget of two populations of bottlenose dolphins in Fiordland, New Zealand.' 1999 *Ecology and Society* 9(1).

¹⁹⁶ *IWC Workshop on Whalewatching*, above n 190, 10.

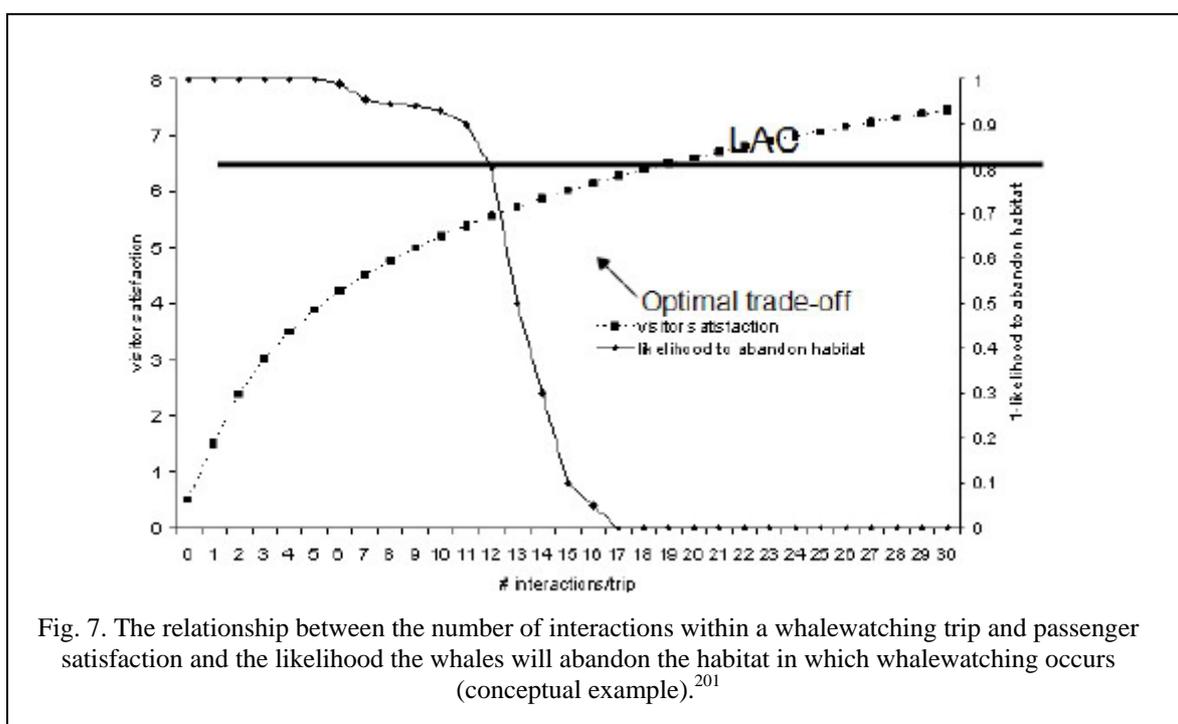
¹⁹⁷ Ibid, Appendix 2: included as Appendix 6.

¹⁹⁸ Ibid, Appendix 3.

¹⁹⁹ Appendix 4.

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The Scientific Committee has built a theoretical model to assess the impacts of boat-based tourist interactions with cetaceans²⁰⁰. Levels of Acceptable Change (LAC) integrates the four key stakeholder groups: the commercial tourism operator, the research community, policy-makers and management agencies in setting a limit for interactions. It was suggested an optimal-trade off established, between visitor satisfaction and the harm to the whale, and the LAC established at that point (See Figure 2).



²⁰⁰ SC/59/WW4. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007); E Smith, D Lusseau. and H Whitehead. 'The Effects of Whalewatching in Pleasant Bay, 1 Cape Breton, Nova Scotia: Balancing Long-term Benefits to Whalewatchers and Immediate Behavioural Changes in Long-Finned Pilot Whales (*Globicephala melas*).' 2007. Substituted to Tourism Management; SC/59.

²⁰¹ SC/59. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

ii. New Zealand: Ideal Guidelines

The Scientific Committee cited New Zealand's Marine Mammal Protection Regulations 1992 as an example of effective legislation fulfilling the IWC's general guidelines. The regulations are issued under the Marine Mammal Protection Act 1972 and lay out comprehensive conditions governing the interaction with all marine mammals and special regulations for specific types. The purpose of the regulations is to "make provision for the protection, conservation, and management of marine mammals, and in particular: (a) regulate human contact or behaviour with marine mammals either by commercial operators or other persons, in order to prevent adverse effects on the interference with marine mammals; (b) to prescribe appropriate behaviour by commercial operators and other persons seeking to come into contact with marine mammals."²⁰² All commercial operators must apply for a permit under s5 of the regulations, and the Director General must be satisfied the operator has sufficient knowledge, experience and lack of convictions for animal mistreatment offences²⁰³, the operation will not cause any adverse impacts and have sufficient educational value²⁰⁴ and it "be in the interests of the conservation, management or protection of the marine mammals that a permit be issued."²⁰⁵ All relevant information must be provided with the application, as well as full details of the proposed operation²⁰⁶. The permit will allow the operator to engage in a specified commercial operation, limited to land or area of water, type of platform used, and

²⁰² Section 2, Marine Mammal Protection Regulations 1992.

²⁰³ Section 6.e,f, Marine Mammal Protection Regulations 1992.

²⁰⁴ Section 6.h Marine Mammal Protection Regulations 1992.

²⁰⁵ Section 6.d Marine Mammal Protection Regulations 1992.

²⁰⁶ Section 8 Marine Mammal Protection Regulations 1992.

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names of relevant masters²⁰⁷. The Director General may decline to grant and revoke permits where there is a reasonable belief it is necessary for the protection, conservation and management of any marine mammal or class of marine mammal²⁰⁸. Permits provide a powerful way to manage commercial whale watching, as well as indirect marine mammal interaction. Most permits in New Zealand are issued for water taxis and other tourist vessels, rather than dedicated marine mammal viewing trips allowing a greater scope to management of whale stocks²⁰⁹.

The provisions are summarised in Figure 6. These cover setting speed and distance limitations in the vicinity of whales, general avoiding disturbance, no separation or cutting off from a group and order abandoning activity when distressed activity is observed. They constitute a powerful attempt at reaching an effective PRP, between the economic interests of the companies and the ideal TRP of no anthropogenic interest. In 1999, Constantine examined the effects of tourism on marine mammals in New Zealand and concluded “New Zealand has a quite strong legislation which fully protects marine mammals.”²¹⁰ A 2003 study found the current regulations governing the number of vessels, and their conduct around whales are sufficient.²¹¹ However, they are not always utilized effectively and Constantine notes concern over increased permits being issued and lack of knowledge over impacts. The burden of proof to show stocks are not threatened must move to the users, in a move towards the

²⁰⁷ Section 12.2 Marine Mammal Protection Regulations 1992.

²⁰⁸ Section 13.2, 15.1 Marine Mammal Protection Regulations 1992.

²⁰⁹ R Constantine. ‘Effects of tourism on marine mammals in New Zealand.’ (1999) *Science for Conservation*: 106. Department of Conservation, 31.

²¹⁰ *Ibid*, 31.

²¹¹ C F Richter, S M Dawson, and E Slooten. ‘Sperm whale watching off Kaikoura, New Zealand.’ (1993) *Science for Conservation* 219. New Zealand Department of Conservation.

precautionary approach²¹². The educational material provided to the public is often misleading and there is little consultation with the Department of Conservation²¹³. New Zealand has also been chastised by the Scientific Committee for its lack of action over a recommendation to increase protection for the Doubtful Sound, New Zealand dolphin population²¹⁴. It is increasingly important regulations reflect species differences. Provision 19.i reflects the significant research into the sperm whale populations off Kaikoura, New Zealand and the importance distinct species markers of distress are identified. Furthermore, no duration of encounter is advised, it is submitted such an analysis would be appropriate given the importance placed on limitations of duration in the Scientific Committee²¹⁵.

²¹² R Constantine, above n 209, 31.

²¹³ C F Richter, S M Dawson, and E Slooten, above n 211; I Beasley. 'Marine mammal tourism: Educational implications and legislation.' (1997) Diploma of Wildlife Management Thesis, University of Otago.

²¹⁴ IWC *Report of the Scientific Committee to the XXX IWC*, 15. IWC/59/Rep 1.

²¹⁵ *Ibid.*

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General	Abandon if seems disturbed.	18.b
	Do not cause separation from group.	18.c
	No litter.	18.d
	No disturbance or harassment.	18.i
	No cutting off path or preventing leaving	18.k
Platform (vessel or aircraft)	Best endeavours to operate in way to not disrupt normal movement or behaviour of any marine mammal.	18.a
	No sudden or repeated change in speed or direction.	18.d
	If stop to watch must place in neutral or switched off within a minute.	18.e
	No aircraft beneath 150 metres. In presence of marine mammal Director General can change this distance to greater or lesser.	18.g,h
	Vehicles must remain above mean high water spring tide mark and not within 50 m of a marine mammal (unless public road or carpark).	18.j
	Less than 300 m away must move constant, slow speed, no faster than slowest marine mammal in vicinity, or idle, or no wake speed.	18.l
	Departing from area less than 300m, idle or no wake speed, unless dolphin to outdistance dolphin but not more than 10 knots within 300 m.	18.m
	Aircraft must not impede on safety of marine mammal.	18.n
Whales	No person in water within 100m of whale.	19.a
	No vessel within 50 m of whale.	19.b
	If whale approaches vessel, manoeuvre so out of path, maintain minimum distance of 50m	19.c
	No vessel or aircraft shall approach within 300 m if 3 platforms already watching whale/dolphin.	19.d/20.e
	No person shall make any loud or disturbing noise near whale.	19.h
	Where 2 or more vessels or aircraft approach an unaccompanied whale/dolphin, masters must cooperate.	19.e/20.f
	No person or vessel shall approach within 200 metres of any female baleen or sperm whale that is accompanied by a calf or calves.	19.f
	A vessel shall approach a whale/dolphin from a direction that is parallel and slightly to the rear of the whale.	19.g/20.g
	Where a sperm whale abruptly changes its orientation or starts to make short dives or between 1 and 5 minutes duration without showing its tail flukes, abandon the whale.	19.i
Dolphins	No going through pod of dolphins.	20.a
	Swimming is ok with dolphins but not with juveniles, or a pod with juveniles.	20.b
	No person may make a loud noise, unless it is an airhorn to call swimmers back to shore.	20.c,d

Figure 8: Summary of Marine Mammal Regulations 1992 Section 8.

Content analysis has suggested almost all codes of conduct are deontological.

Providing strict guidelines without explanation is not the most effective measure to ensure industry belief and interaction with rules²¹⁶. Rather, they should be “self-explanatory, positive and avoid prescriptive language.”²¹⁷

The last Scientific Report noted a paradigm shift towards the more effective management of whale watching. An Australian ministerial decision reduced the number of commercial dolphin-watch licenses from two to one in Shark Bay as a

²¹⁶ S Blangy, and M Epler. ‘Developing and Implementing Ecotourism Guidelines for Wildlands and Neighbouring Communities,’ In K Lindberg and D Hawkins, (eds.), *Ecotourism: A Guide for Local Planners* 1993.

²¹⁷ B Garrod and D A Fennell, above n 9, 31 (2).

necessary sacrifice for the long-term sustainability of the area²¹⁸. This occurred after a lengthy research program and scientific advice stating the area had exceeded the “Levels of Acceptable Change.” However, a survey of international regulations has shown guidelines differ between different species, areas and seasons²¹⁹. Some nations do not have any regulations despite significant whale watching industries²²⁰. However, the only continent without a regulatory Code of Conduct is Antarctica²²¹.

iii. Comparison: New Zealand and Antarctica

That is perhaps something of a misnomer; all activities in the Antarctic are governed by the Environmental Protocol. The nations who have signed or ratified the Protocol require Environmental Impact Assessments for any activities in the Antarctic, and tourism operators regularly submit assessments to the competent Government authority²²². Not all operators are required to submit assessments under national law²²³, but the industry group IAATO demands strict adherence to environmental guidelines. This includes prior notification, environmental assessment, contingency plans, reporting requirements, and other measures to ensure compliance with Protocol obligations²²⁴. IAATO also provides mandatory guidelines for dealing with marine

²¹⁸ SC/59/WW3. *Annex M: Report of the Sub-Committee on Whale Watching*. ATCM XXX (2007).

²¹⁹ C A Carlson. ‘A Review of Whale Watching Guidelines and Regulations Around the World.’ (1996) Report for the International Fund for Animal Welfare.

²²⁰ R Constantine. above n 209, 31.

²²¹ B Garrod and D Fennell, above n 9.

²²² R Williams and K Crosbie, above n 12.

²²³ Ibid.

²²⁴ See Appendix III for a full list.

mammals. Only two known commercial operators are not members of IAATO, and one of those attends IAATO meeting and abides by the rules²²⁵.

The advantages of a voluntary code include they are more likely to be “owned” by their intended users, through self development²²⁶. The Dolphin Space Program’s code of conduct developed by Scottish Natural Heritage (a government agency) in the mid 1990s collapsed due to industry belief it was focussed on conservation rather than industry (Hughes 2001). The industry has subsequently started a code of its own. However, the rapid growth of the industry in Antarctica suggests a voluntary code may not be sufficient²²⁷.

The IAATO Marine Wildlife Watching Guidelines (Whales, Dolphins, Seals and Seabirds) for Vessel and Zodiac Operations²²⁸ present a formidable set of guidelines for IAATO members. The aim of the code is to minimize potential disturbance, displacement from important feeding areas, disruption of feeding and disruption of reproductive and other socially important behaviours, changes to regular migratory pathways to avoid human interaction zones, stress from interaction, injury, and increased mortality or decreased productivity. These covered similar provisions to the New Zealand regulations, but did so in a teleological manner, explaining why each of the provisions needed to be engaged in. Furthermore, they include more extensive guidelines for activity at the various points of approach, how to identify distress signals, as well as generally more stringent provisions. The operators are encouraged

²²⁵ Personal correspondence with IAATO (iaato@iaato.org). 9 February 2008.

²²⁶ B Garrod and D Fennell, above n 9.

²²⁷ Discussed in further detail below.

²²⁸ See Appendix VII for a complete summary.

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to report sightings, especially observed strandings and entanglement in fishing equipment. A brief comparison between New Zealand and IAATO Guidelines is included in Figure 9.

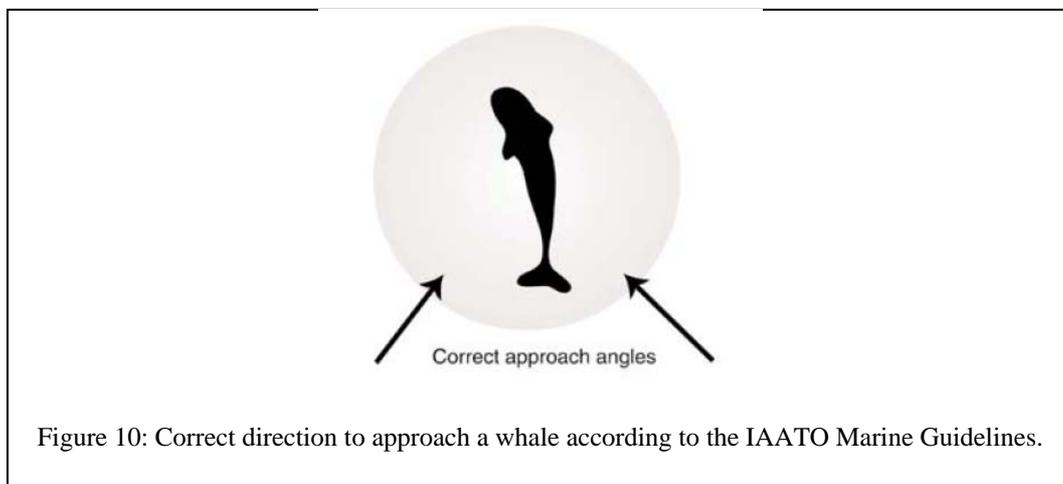
	New Zealand	IAATO
General	Abandon if seemed disturbed, try not to disrupt normal movement, no disturbance or harassment.	Evaluate behaviour patterns – “Use your best judgement” – list of behavioural changes when agitated.
	Do not cause separation from group. Do not cut off path or prevent leaving. Do not drive through dolphin pod.	Do not herd, separate, scatter or pursue.
	No sudden or repeated change in speed or direction.	Avoid sudden changes in direction or speed.
	If stop to watch must place in neutral or switched off within a minute.	To stop to watch leave engine idling.
	No aircraft beneath 150 metres. In presence of marine mammal Director General can change this distance to greater or lesser. Aircraft must not impede on safety of marine mammal.	No aircraft beneath 300m.
		Stay well clear of feeding baleen whales.
		Never attempt to touch or feed animals.
		Stay maximum time of one hour.
Platform (vessel or aircraft)	Less than 300 m away must move constant, slow speed, no faster than slowest marine mammal in vicinity, or idle, or no wake speed.	3000/1500 away – lookout appointed, 10 knots max, 1500/750 – 5 knots max, 750 – less than 5 knots – avoid sudden changes, 200m – no wake/idle speed.
	No person in water within 100m of whale. Swimming is ok with dolphins but not with juveniles, or a pod with juveniles.	
	No vessel within 50 m of whale.	No big ships closer than 100m, no small ships closer than 30m.
	If whale approaches vessel, manoeuvre so out of path, maintain minimum distance of 50m.	If whale approaches vessel turn engines off, allow to use as a backscratcher if safety not compromised. Try to withdraw to minimum recommended distance.
	No vessel or aircraft shall approach within 300 m if 3 platforms already watching whale/dolphin.	Not more than 2 ships, and 4 small ships, shall approach to within 200m. Only 1 ship to within 30m/100m.
	No person shall make any loud or disturbing noise near whale.	Radios must be kept low, loud noises must be avoided, there must be no playback of underwater sound. Within 30m/100m no gear changes, motors neutral/idle without turning off to avoid sound changes, now bow and stern lateral thrusters.
	No person or vessel shall approach within 200 metres of any female baleen or sperm whale that is accompanied by a calf or calves.	
	A vessel shall approach a whale/dolphin from a direction that is parallel and slightly to the rear of the whale.	Ideally cetaceans should be approached from the side and rear (See Figure 1).
		No boxing in with boats. Leave a tunnel for whales to leave. Do not trap between vessel and shore.
Species specific	Where a sperm whale abruptly changes its orientation or starts to make short dives or between 1 and 5 minutes duration without showing its tail flukes, abandon the whale.	Humpback whales when feeding let up small bubbles, avoid green bubble patches.

Figure 9: Comparison between Section 8 of Marine Mammal Regulations 1992 and IAATO Marine Wildlife Watching Guidelines (Whales, Dolphins, Seals and Seabirds) for Vessel and Zodiac Operations 2007.

In all, the IAATO Guidelines are clearer and more easily applicable to real life tourist situations. All approach distances are further than the New Zealand 50m rule, with the exception of small zodiacs, one of which can approach to 30m. It advises a maximum

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duration, only 2 ships within 200m of the whale, staying clear of feeding baleen whales and more comprehensive advise on how to fulfil objectives in a real life setting. McCauley's²²⁹ recommendations have been completely fulfilled by the legislation, including stressing the importance of the changes in noise rather than the ambient noise levels. However, IAATO does not mention special care to be taken round calves or rules regarding entry into the water. Presumably the latter is less of an issue at -1.8° C, although the former may constitute a significant gap.



Not much is known about the whale populations of the Southern Ocean²³⁰, despite a regular and concerted attempt at scientific research through the JARPA I, JARPA II and other national programs²³¹. The monitoring done by the tourist programs is very important in increasing this knowledge bank and has played a major role in such large

²²⁹ R D McCauley, D H Cato and A H Jeffery, 'A study of the impacts of vessel noise on humpback whales in Hervey Bay', (1996). Report for the Queensland Department of Environment and Heritage, Maryborough Office, from the Department of Marine Biology, JCU.

²³⁰ A Gillespie, above n 7, 248.

²³¹ M Heazle, above n 14, 187.

projects as the Census of Antarctic Marine Life²³². and although meeting the requirements of the overall guidelines set by the IWC, particularly allowing cetaceans to control the nature and duration of the activity, and maintaining and operating platforms to minimize risk of adverse effects, it is not sufficient to truly manage the activity efficiently. Tourism in Antarctica requires regulation to remain sustainable.

4. Commercial Tourism in the Antarctic

A. Definitions

Ecotourism is a term that has a wide range of defining criteria²³³. Bjork notes a strict theoretical definition is required in order to adapt the dimensions to a particular tourism area²³⁴. The defining parameters of ecotourism applied in an Antarctic context can be separated into essential, preferential and applicable (see figure 1). Unlike other areas, every activity on the Antarctic continent is governed by the restrictions in Article 3 of the Environmental Protocol. Activities must be modified, suspended or cancelled if they result in or threaten to result in impacts on the Antarctic Environment or dependent or associated ecosystems. Furthermore, all activities on the continent must consider its inherent values, including wilderness and aesthetic values and the utility of the area for science.

²³² R Williams and K Crosbie, above n 12., 7.

²³³ D A Fennell, 'A content analysis of ecotourism definitions.' (2001) *Current Issues in Tourism* 4 (5).

²³⁴ D P Bjork, 'Ecotourism from a conceptual perspective: An extended definition of a unique tourism form,' (2000) *International Journal of Tourism Research* 2 (3).

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Level 1: Essential Parameters	Very low economical impacts.
	Commercially viable.
	Visitor management.
	Ecologically sustainable.
	Conservation advocacy.
	Evaluation and Analysis.
Level 2: Preferable parameters	Visitor education.
	Small scale.
	Low visitor numbers.
	Environmental Impact Assessment.
Level 3: Employed where applicable	Link to science and research.

Figure 11: Relevant parameters to ecotourism in Antarctica²³⁵.

The vast majority of commercial tourism engaged in Antarctica fits within the ecotourism model²³⁶. IAATO has described ecotourism in the Antarctic as “a symbiotic relationship between tourism and conservation.”²³⁷ There are many forms of tourism that exist outside the commercial tourist framework, that perhaps do not have such a focus. National programs often have elements of tourism, from their supporting of the infrastructure of cultural heritage to educational programs on the ice. The Graduate Certificate of Antarctic Studies a course set up by the University of Canterbury involving a two week experience of Antarctic science and life on Ross Island might fit into the category.

B. Background

Starting in the 1950s, Antarctic commercial tourism showed great annual variation until the 1990s²³⁸. Since then, tourist numbers have been increasing significantly (see figure 12). It is the largest contributor to human activity within the Treaty Area, with an estimated 37,552 tourists visiting the area by land or sea during the 2005/06

²³⁵ Adapted from J E S Higham and A M Carr, ‘Defining Ecotourism in New Zealand: differentiating between the defining parameters within a national/regional context.’ (2003) *Journal of Ecotourism* (2)1.

²³⁶ IAATO. *Report to the XXX ATCM*. (2007).

²³⁷ Williams R and Crosbie K, above n 12.

²³⁸ D J Enzenbacher, ‘Tourists in Antarctica: numbers and trends’, (1992) *Polar Record* 28(164), 18.

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summer season with a further 22,230 involved as crew or staff on the vessels²³⁹. The industry has traditionally been dominated by small to medium sized vessels that spend the entire tour (usually 10-21 days) aboard these vessels, with periodic landings at coastal sites²⁴⁰.

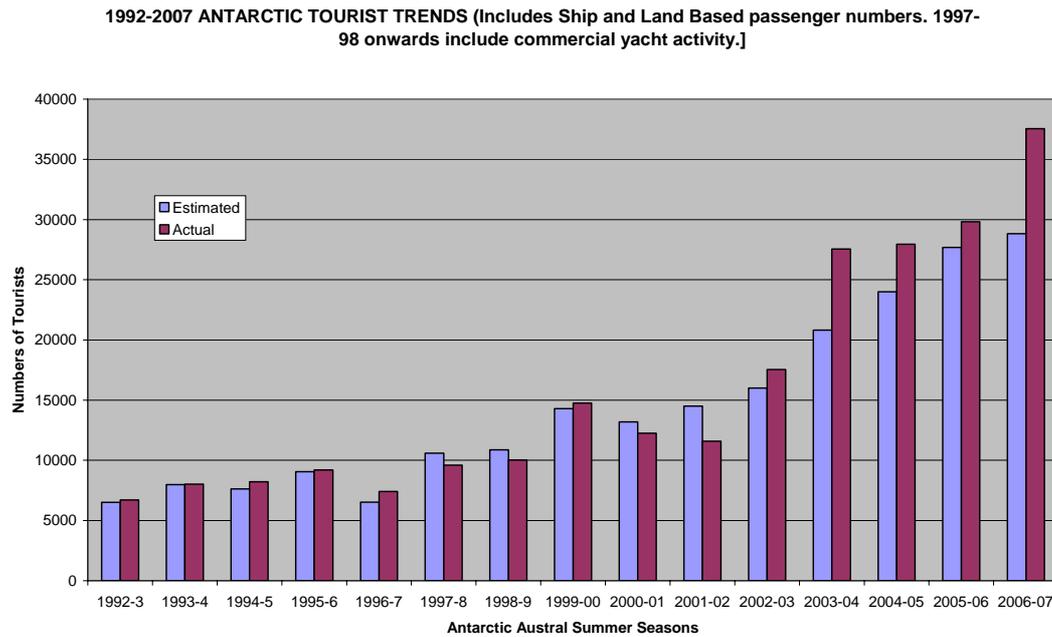


Figure 12. 1992-2007 Antarctic Tourist Trends²⁴¹.

Erik-Lars Lindblad organised the first cruise dedicated solely to tourism in Antarctica and introduced the concept of education combined with environmentally sensitive travel²⁴². Often referred to as the “Lindblad model”, it has played an important role in

²³⁹ ‘IAATO Annual Report 2006-2007’, *Report to the XXX ATCM*, (2007). IP134.

²⁴⁰ A D Hemmings and R Roura, above n 11, 18.

²⁴¹ Adapted from: IAATO . ‘Overview of Antarctic Tourism 2006-2007 Antarctic Season (June 18, 2007 version 1) *Report to the XXX ATCM*. (2007). IP121.

<http://image.zenn.net/REPLACE/CLIENT/1000037/1000115/application/msword/IAATOOversview2006-07REV1june18update.doc> at 6 February 2008.

²⁴² R Headland, ‘Historical development of Antarctic tourism,’ (1994) *Annals of Tourism Research*, 21(2).

developing the model for traditional Antarctic ecotourism²⁴³ that continues to be used by the majority of small-ship operators in the Treaty Area²⁴⁴. The legitimacy of the activity is often derived from this educational component. The textual reference in the Environmental Protocol to aesthetic values²⁴⁵ is seen as giving something of a formal acceptance to the legitimacy of tourism as an activity²⁴⁶. Visitors are perceived as coming away from Antarctica as “ambassadors” for the continent, committed to protecting the aesthetic and wilderness values that made their trip so special²⁴⁷.

C. The Problems with Industry

However, there is virtually no research showing this is the case²⁴⁸ and the industry has less of a focus on the traditional model. The scale of the industry is changing. Set up by seven Antarctic Tour operators in 1991, 101 members now compose the organisation. 18 operators have joined more since the ATCM, one of the most significant increases since the start of the organisation²⁴⁹. 52 ships have a capacity of less than 200 passengers, 6 with a capacity of 200-500, and 6 with a capacity of over 500²⁵⁰. Two regular tourist ships exist outside the IAATO framework, with ships of

²⁴³ G Mortimer, *Antarctic tourism – Past, present and future*. (2004) Paper presented at 2004 3rd Annual Phillip Law Lecture, Hobart.

²⁴⁴ J D Hanson and J E Gordon, above n 114.

²⁴⁵ Madrid Protocol, Article 3.

²⁴⁶ R Herr, ‘The effectiveness of tourism regulation,’ in (eds. Stokke, O, S; and Vidas, D); *Governing the Antarctic*, (1996), 221.

²⁴⁷ P T Maher, G Steel, and A McIntosh, *Antarctica: Tourism, wilderness, and “Ambassadorship”*, (2003).

²⁴⁸ *Ibid*, 208.

²⁴⁹ IAATO. *Report to the XXX ATCM*. (2007)..

²⁵⁰ *Ibid*.

over 500 passengers²⁵¹. New patterns of ownership are replacing smaller owner/operator arrangements with multinationals and larger companies²⁵². There appears to be a diversification away from the traditional model, towards bigger ships offering the experience at a cheaper price or part of a wider world wide adventure.²⁵³ Furthermore, specialist niche companies are beginning to offer more and more adventure tourism to high-end customers²⁵⁴. The Antarctic environment, although harsh and uncompromising, will not limit the diversification of these industries if they remain profitable and popular²⁵⁵.

The potential environmental impacts are one of the main concerns associated with tourism, but there appears little research into the real or potential impacts has been undertaken. Maher and McIntosh²⁵⁶ estimated less than 0.5% of the Continent is visited by tourists and Headland²⁵⁷ estimated in 1994 the total impact on the Continent by tourists as a result of landings is minor. However, the risks associated with ship-based tourism on already fragile cetacean populations have been established.

²⁵¹ R Williams and K Crosbie, above n 12.

²⁵² A D Hemmings and R Roura, above n 11, , 18.

²⁵³ Ibid.

²⁵⁴ R Herr, above n 245, 222.

²⁵⁵ Ibid.

²⁵⁶ Above n 246, 208.

²⁵⁷ R Headland, 'Historical development of Antarctic tourism,' (1994) *Annals of Tourism Research*, 21(2).

D. The Problem with Regulation

The current industry is governed by the Environmental Protocol, but is otherwise unregulated. In 1991, partially as a result of the lack of guidance by the ATS and partially because of an increase in the number of operators and concern the risks to the environment may force Treaty partners into regulating, a voluntary industry organisation has been formed. IAATO's aim is to advocate, promote and practice environmentally responsible private-sector travel to Antarctica (Splettstoesser 2000). It has largely been successful at its aims and continues to represent one of the most effective self regulating bodies in world industry(Splettstoesser 2000). However, the exponential growth of operators and the sinking of the ice strengthened M/S Explorer²⁵⁸ in 2007, suggests that the NGO proposals for a regulatory framework for tourist activities may be given more serious consideration²⁵⁹.

The failure of the Environmental Protocol to deal with tourism is further evidence regulation is required. It is clear that the current management of tourism is not consistent with the provisions of the Protocol. In its preamble, the Protocol commits itself to “comprehensive environmental protection”, adapts an extreme appropriation of the precautionary principle in respect to mining but only a weak approximation for

²⁵⁸ IAATO, *Incident Involving the M/S Explorer*, (2007) 26 November,

http://www.iaato.org/docs/MV_Explorer_Report_Nov_26_2007.pdf at 1 February 2008.

²⁵⁹ ASOC Statement on the Sinking of the Tourism Cruise Vessel *MV Explorer* in Antarctica, (2007) 26 November

<http://www.asoc.org/pdfs/2007/asoc%20statement%20on%20mv%20explorer%20112607.pdf> at 1 February 2008.

tourist activities²⁶⁰. Despite the significantly different impacts of the two activities, there is no substantive reason for the discrepancy. From 1991 to 2002, only six CEEs have been produced, all for activities by National Antarctic Programs. 51 of the 309 IEEs from 1991 to 2002 came from tourist operators²⁶¹. In general, IAATO is supportive of the case for prior EIA²⁶², but not without reservation. The scale, cost and uncertainty for tourism in the Antarctic means events must be scheduled years in advance, the risk of cancellation or delay from causes outside of nature may cripple the industry. The “expedition style” method of tourism often employed requires as much freedom with site visitation as possible, and an open reading of the Environmental Protocol suggests many tourist operators may need to complete CEEs, explicitly analysing their entire trip. Furthermore, increasing competition has led to more commercial sensitivity about site information. However, each of these issues may be addressed through the EIA process, with fall-back sites and allowances for weather and other issues. Commercial exposure and the risk of closure are necessary exponents of being involved in the Antarctic treaty system. At the heart of the Treaty system involves cooperation between governments, sharing of scientific information and resources, with the purpose of devoting the continent to peaceful purposes²⁶³. By no means should a commercial industry be permitted to exist outside this model.

Two workshops set up by the World Conservation Union on “Cumulative Environmental Impacts in Antarctic” and “IAATO Workshop on Environmental Assessments: Building the Frame,” in 1996, recommended the most effective way to

²⁶⁰ S V Scott, ‘How cautious is precautionous?: Antarctic Tourism and the Precautionary Principle,’ (2001) *The International and Comparative Law* 50 (4) 963.

²⁶¹ A D Hemmings and R Roura, above n 11, 17.

²⁶² A D Hemmings and R Roura, above n 11, 18.

²⁶³ Antarctic Treaty, Preamble; Madrid Protocol, Preamble.

address potential impacts lay in conducting an overall EIA. However, the severe issues with applying the Protocol to tourist activities are a function of the clumsiness of the general system. The requirement to engage in IEEs and CEEs are carried over from their first incarnation, when they were meant to only apply to national science programmes and supporting logistical activity²⁶⁴. The IEE and CEE structure was developed for a single discrete site that needed to be planned well in advance anyway. Tourist activities also engage in discrete sites, in particular the historic huts and known colony points. However, most activities of tourism, “involve multiple sites not necessarily previously visited, which will only be visited infrequently and are distributed over a huge area.”²⁶⁵

This has particular reference to whale watching. An IEE requires describing an activity, its purpose, location, duration and intensity. When whale watching is, even in the most frequently visited areas, a chance occurrence, a tourist operator might be postulating on hypothetical events and impacts. These are significant; it is these potential impacts which must be examined with real detail and mitigation measures taken in advance. Without consideration of these issues, there are real risks posed to cetacean populations with growing operators with less of an environmental conscience. Furthermore, with the minimal scientific acumen that any small commercial operator possesses, it is unlikely they will be able to engage in the quite substantive analysis required to analyse location, duration and intensity²⁶⁶. These difficulties are increased with a CEE, and given the industry regulation is voluntary in nature, it is unlikely there will be an impetus to make such analysis requisite. More

²⁶⁴ R Herr, above n 245, 222.

²⁶⁵ A D Hemmings and R Roura, above n 11, 20.

²⁶⁶ A D Hemmings and R Roura, above n 11, 21.

and more states within ASOC are also flagged under different states²⁶⁷. However, the industry has generally exceeded the requirements under the ATS²⁶⁸ and has been at the forefront of developing environmentally responsible guidelines in the treaty area²⁶⁹. In the 2006/7 season, all IAATO members submitted either EIAs or operational documents that substitute for EIAs to their national authorities, despite the fact not all governments require EIAs or yearly updates. The organisation noted inconsistencies between documents but has “bridged gaps in documentation for ship-based Members in particular to assure there are mitigation measures and procedures in place to avoid environmental impacts.” It should also be noted, IAATO has not registered any movement away from the environmental goals that defined its foundation, even with the drastic increase in membership²⁷⁰.

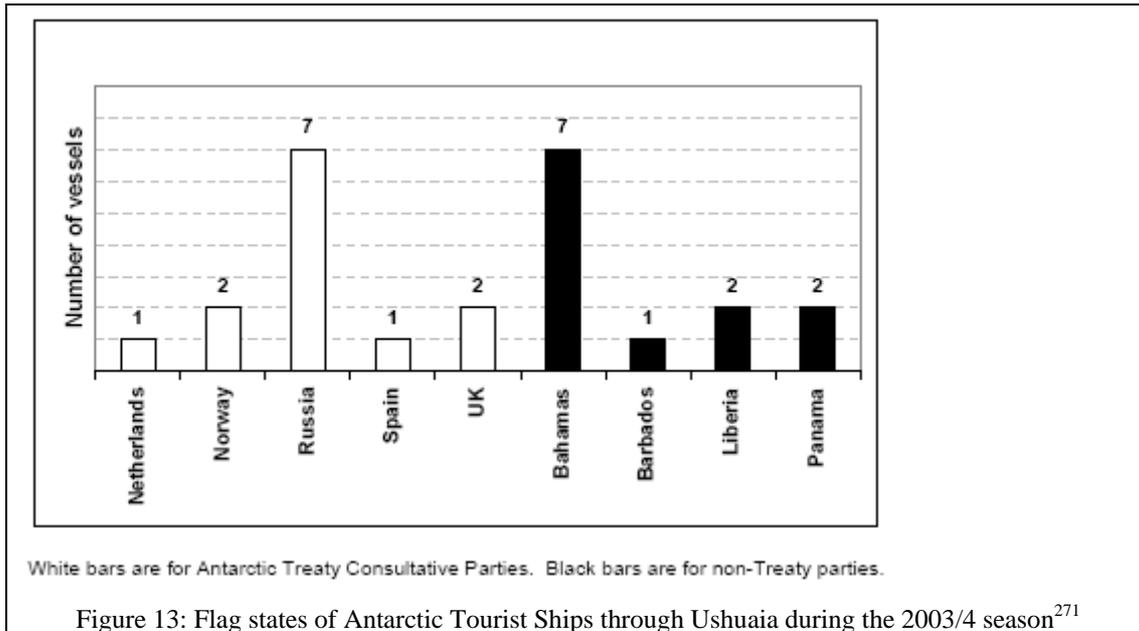
²⁶⁷ See Figure 10.

²⁶⁸ R Herr above n 245, 221.

²⁶⁹ J D Hanson, and J E Gordon, above n 144.

²⁷⁰ Personal correspondence with IAATO (iaato@iaato.org). 9 February 2008.

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Nevertheless, one of the characteristics of sustainable ecotourism is controlled and sustained growth through active management²⁷². The Antarctic Treaty system has no reasonable way to actively manage tourist vessels. EIAs usually exist within a broader evaluation system, after a more substantive analysis of the substance of the activity without looking at the particulars²⁷³. Engaging in extensive analysis of a particular activity and attempting to generalise impacts from that activity is not an efficient form of industry management. One should have well established general policies for the various components of the activity, that can be critically examined, then specifically planned out. The only real barrier to the construction of permanent land based tourist structures is still, as it was in the late 1980s, when media mogul Kerry Packer attempted to circumvent international law and build his own airstrip and hotel,

²⁷¹ ASOC. Antarctic Tourism Graphics: An overview of tourism activities in the Antarctic Treaty Area Submitted to the XXVIII ATCM by the Antarctic and Southern Ocean Coalition and the United Nations Environment Programme. (2005).

²⁷² F P Bosselman, C A Peterson and C McCarthy, *Managing Tourism Growth: Issues and Applications* (1999).

²⁷³ A D Hemmings and R Roura, above n 11, 21

political pressure²⁷⁴. As the industry grows, it will continue to grow in its political impact and potential to block change. ASOC has warned against its continuing growth as a political power in the treaty system²⁷⁵. The Antarctic Treaty Parties may be limited in their time to challenge this growing threat to stability in the ATS.

5. The importance of science

The role of scientific inquiry in determining the issues in whale watching is essential. However, every discussion in Antarctica policy should include a critical examination of the role of science in the treaty system. In 1991, the Environmental Protocol set aside the continent for “peace and science”, with all activities giving consideration to the inherent value of the continent to science. Throughout Antarctic history, most activities on the continent are linked with the physical sciences, with other programs developing but limited by the importance placed on the continent as a “global barometer”²⁷⁶. The primacy of science has played an important role in retaining the continent for peace, certainly in the Cold War.²⁷⁷ However, Lidskog and Sundqvist (2002) note many of environmental international instruments are characterized by a strong research dependency with relatively little discussion of the legitimacy of scientific endeavours. International institutions seem to largely ignore two

²⁷⁴ M Lamers, ‘Permanent land based tourism in Antarctica’, 2006. Project for Graduate Certificate in Antarctic Studies:
<http://www.anta.canterbury.ac.nz/documents/GCAS%20electronic%20projects/Machiel%20Lamers%20Project.pdf> at 12 February 2008.

²⁷⁵ ASOC, ‘The case for concern about Antarctic tourism,’ (2004) Information Paper for the XXIX ATCM. IP120.

²⁷⁶ J S Davidson. ‘The Antarctic legal environment: an Introduction’. (2001) University of Canterbury.

²⁷⁷ Ibid, 18.

fundamental issues: that science and politics intermingle and that uncertainty is unavoidable in science due to its inability to establish universal truths²⁷⁸.

Science refers to the systematic study of the structure and behaviour of the physical and natural world through observation and experiment. The scientific method explains the process of a hypothesis explaining a phenomena and being tested through empirical evidence and observation²⁷⁹. However, a fundamental difficulty with scientific inquiry lies in the philosophic difficulty in connecting the world of reason to what we understand is reality. Hume isolated the underlying issue²⁸⁰: it is consistent and conceivable that the course of nature might change, so any deductions made from past occurrences will not necessarily hold true for the future²⁸¹. The fact the sun has always risen, does not necessarily mean it will rise tomorrow. Hume's own answer to this problem lay in man's natural response to that conundrum. Kenyon puts it eloquently, "reason might manage to raise a doubt about the truth of a conclusion of natural inductive inference just for a moment in the study, but the forces of nature will soon overcome that artificial scepticism, and the sheer agreeableness of animal faith will protect us from excessive caution and sterile suspension of belief."²⁸² Despite, perhaps the truth in this statement, Hume's original argument is valid; there is no

²⁷⁸ M Heazle, above n 14, 17.

²⁷⁹ C Hoanes and S Hawker, *Compact Oxford Dictionary of Current English*, (2005).

²⁸⁰ D Hume, *An enquiry concerning human understanding*, (1999).

²⁸¹ Ibid.

²⁸² John D. Kenyon, 'Doubts about the Concept of Reason', in *Proceedings of the Aristotelian Society Supplementary Volume*, Vol. 59, (1985), 249-267, p.255.

good reason for believing in inductive truth, other than the pragmatic reality that it has always worked in the past²⁸³.

However, there have been several serious attempts at justifying scientific endeavour. Popper argued that science derives truth from the falsification of theory, rather than the proof of theory. First introduced by Popper in *Logic of Scientific Discovery* in 1934, falsification entails theories are adopted till they are disproved. Through observing a string of events, one might not be able to determine one's truth is valid, but one can certainly show that another is not. However, simply falsifying theories does not determine a truth and there is no more reason to believe a truth is proved than disproved²⁸⁴. Kuhn rejected these ideas completely, believing science is a sequence of attempts at puzzle solving, whose methods are determined by the democratic trends in scientific whims²⁸⁵. Lakatos believes it is the problem solving methods that derive the science²⁸⁶. A theory must be disposed of, if the empirical from the model is producing false negatives or false positives. It is the validity of the model which is the important part, otherwise there is no theory being evaluated. If the model is sufficient, the theories validity will be accurately tested. However, Lakatos does not come up with any meaningful way of determining the accuracy of a research model²⁸⁷. Without a way to determine a scientific method from an unscientific one, his distinction is meaningless²⁸⁸. However, it is this latter view that appears to better represent the utility of science.

²⁸³ M Heazle, above n 14, 17.

²⁸⁴ M Heazle, above n 14, 19.

²⁸⁵ T S Kuhn, *The Structure of Scientific Revolutions* (1996), 203.

²⁸⁶ B Larvor. *Lakatos: An Introduction*. (1998).

²⁸⁷ M Heazle, above n 14.

²⁸⁸ M Heazle, above n 14, 18.

The primacy of science in today's world system is partially a result of anti-rationalism in the wake of the Renaissance and has largely ignored Hume's fundamental problem²⁸⁹. The crucial issue with science is that it exists on a "bed of values and policy."²⁹⁰ Every scientific project is approved through a grant process, set by politics. The direction of scientific enquiry is fluid and motivated by decision making beyond any intrinsic expansion of human knowledge. There must be a utility to the science and the science must produce useful results²⁹¹. Feyerabend goes as far as stating "scientific rationality is not an ideologically neutral magistrate for the market-place of ideals."²⁹² It is merely a structure to test hypotheses empirically. To suggest as an abstract concept it has a stake in the actual formulation and adoption of policy is ludicrous. However, to state that the sum total of human knowledge achieved through science should be utilized is necessary. The chief issue, in terms of the ICRW has been in the utilization of the concept of uncertainty in science and the precautionary principle for both sides of the argument²⁹³. When the fact that science can never be certain is utilized by policy makers, it can have dangerous implications. Similar issues can be raised in the context of non-lethal utilization. There can be no distinct point where scientific knowledge becomes complete enough to justify intervention. Scientific knowledge can only accrue; it cannot get closer to a perfect knowledge set.

²⁸⁹ B Russell. *Sceptical Essays*. (1961).

²⁹⁰ R Lidskog and G Sundqvist, 'The Role of Science in Environmental Regimes: The Case of LRTAP', (2002) *European Journal of International Relations* 8 (77) <http://ejt.sagepub.com/cgi/reprint/8/1/77> at 10 February 2007.

²⁹¹ M Heazle, above n 14, 25.

²⁹² Feyerabend, P. K. cited in B Larvor, above n 286, 91.

²⁹³ See above

What must be considered is the policy behind scientific endeavours, and in the context of an international institution, clear ethical distinctions and dimensions must be isolated and engaged. Heazle suggests the actual policy practised focuses on objective and universal human needs, but also identifies the effects of fulfilling those needs on other needs²⁹⁴. The actual distribution of power in world society plays an essential role in this policy. If a need of one interest group, clashes with another, it is the more powerful that will prevail. Heazle notes the interesting discrepancy between investment in anti-impotence and anti-malaria medication. Dr. Timothy Stamps, Zimbabwe's former Minister for Health and Child-Welfare noted in 1998, "there is virtually no investment in anti-malaria drug-development...Of course the group which will benefit from new drugs is the poor, and they cannot afford to buy them so there is very little point if your philosophy is to look after your shareholders rather than the stakeholders."²⁹⁵

Non-lethal exploitation benefits a wide range of societies, and any regulation must consider the impacts on those that rely on the profits from the activity. However, it must also consider the effects on the animals, the populations and the individuals within the populations. The Antarctic Treaty Consultative Members must analyse and interact with these issues in a substantive way before engaging in decision making based on data. This does not mean a precautionary approach should be abandoned. Uncertainty in scientific research simply identifies a greater threat, unsustainable impacts. There is no way to ever know with certainty that a studied phenomenon will continue, but practically it is necessary to assume that it is the case. Consequentially, we can use this assumption to build a system of rules, by no means based on a higher

²⁹⁴ M Heazle, above n 14 28

²⁹⁵ Dr. Timothy Stamps cited in M Heazle, above n 14, 28-9.

rational order, but on practical reality. The use of the word uncertainty should be cautious and should not ever refer to the more underlying uncertainty of scientific goals, but that does not mean we should abandon management steps in areas where our practical knowledge is less than full. The rigid scientific method is sometimes not the most appropriate option, for example, local inherited knowledge in the Azores might have been a more appropriate management tool²⁹⁶. However, in areas of particular vulnerability, especially where local knowledge is not available, the higher standard of scientific scrutiny should be exercised.

6. A New Direction

Whales do not only face the threats of human imposed whale watching. Despite considerable international outrage, Japan has continued its JARPA lethal research programs in the Southern Ocean ignoring the Southern Ocean Sanctuary²⁹⁷.

CCAMLR originally formed as a response to krill harvesting, Consulting Parties fearful the exploitation of the main producer for the Southern Ocean could have severe effect on the entire ecosystem²⁹⁸. However, the organisation is still grappling with effective krill management routines, if krill are overfished, there could be severe effects on Baleen whale populations²⁹⁹. “The Southern Ocean can no longer be regarded as an area with low levels of pollution,” with low concentrations of

²⁹⁶ K Neves-Graça, above n 117, 42.

²⁹⁷ IWC, Report of the XXX IWC (2007).

²⁹⁸ D G Miller, ‘Managing Antarctic Marine Living Resources: The CCAMLR Approach,’ (2004) *The International Journal of Marine and Coastal Law*, vol 19, no 3, 319.

²⁹⁹ S Nicol and G Robertson, ‘Ecological Consequences of Southern Ocean Harvesting,’ in N Gales, M Hindell, R Kirkwood (eds.), *Marine Mammals: Fishing Tourism and Management Issues* (2003).

organochlorine contaminants and metals found in most Antarctic species³⁰⁰. Despite minimal information, the findings of many studies indicate pollutants are currently posing a large enough threat to marine mammals to warrant concern³⁰¹. Speculation over possible impacts of climate change indicates marine productivity level could be drastically changed and threaten whale feeding patterns³⁰². The recent declaration of the baiji river dolphin as possibly extinct on the IUCN Red List of threatened species indicates the very real impact humans are having on cetacean populations³⁰³. These continued threats further the necessity for regulation and protection of populations from all human interactions.

A. Options for Regulation

The most prominent lobbyist for the regulation of the tourism industry has been the Antarctic and Southern Ocean Coalition. Since 1999, ASOC has submitted a string of information papers relevant to tourism to the Antarctic Consultative Treaty Meetings and pushed for regulatory controls on tourism. In 1999, ASOC submitted a paper warning of the excessive growth of the tourist industry and the necessity of action by Consultative Parties. “Failure to act would eventually kill the hope that on this continent we can avoid at least some of the environmental absurdity that has been

³⁰⁰ K Evans, ‘Pollution and Marine Mammals in the Southern Ocean: Potential or Present Threat?’ *Marine Mammals*.

³⁰¹ *Ibid*, 435.

³⁰² M MacGarven and M Simmonds, ‘Whales and Climate Change’ in M P Simmonds and J D Hutchinson (eds.) *The Conservation of Whales and Dolphins: Science and Practice* (1996), 325.

³⁰³ B D Smith. *Lipotes vexillifer*. In *2007 IUCN Red List of Threatened Species*. (2007) www.iucnredlist.org at 15 February 2008.

created elsewhere in the questionable pursuit of limitless growth.”³⁰⁴ In 1994, submitting 3 papers to the Antarctic Treaty Meeting of Experts and the XXVII ATCM, making a case for Antarctic Tourism³⁰⁵, outlining the consequences³⁰⁶ and proposing various options for regulation³⁰⁷. Although not influencing the policy setting at the meetings, ASOC noted a distinct shift in the ideology of Parties towards regulation for tourism, accepting the industry would eventually need some systematic form of control³⁰⁸.

ASOC identify four possible regulatory options for the Antarctic Treaty parties: a new ATS Instrument, “Convention on the Regulation of Antarctic Tourist Activities,” (CRATA) an Antarctic Treaty Measure, a new Protocol Annex, and a series of hortatory Guidelines. The United Kingdom in its Working Paper 23, *Proposals to improve the management and regulation of Antarctic tourism* includes suggestions for greater utilization of site specific guidelines in the Protocol, a Resolution calling for greater adherence with the Protocol, creation of a central database, greater port state protections and the adoption of an on-board observer scheme³⁰⁹. Although there has been an increase in debate regarding tourism,

³⁰⁴ ASOC ‘Large Scale Antarctic Tourism.’ (1999) Information Paper for the XXIII ATCM.

³⁰⁵ ASOC, ‘The Case for Concern about Antarctic Tourism.’ (2004) Information Paper from ATME 2004.

³⁰⁶ ASOC, ‘What does the Regulation of Commercial Tourism mean?’ (2004) Information Paper from ATME 2004.

³⁰⁷ ASOC, ‘Mechanisms for Regulating Commercial Tourism.’ (2004) Information Paper from ATME 2004.

³⁰⁸ ASOC, ‘The Regulation of Antarctic Tourism: State of Play after the Antarctic Treaty Meeting of Experts (Norway 22-25 March 2004)’, 3.

³⁰⁹ Not an exhaustive list.

It is submitted the most appropriate method of regulation is a new instrument. Within the Antarctic treaty system, only two instruments remain active, the Antarctic Treaty with the Protocol, and the Convention on the Conservation of Marine Living Resources (CCAMLR)³¹⁰. CCAMLR governs the other major human activity in Antarctica, fishing. Article 2 provides harvesting in the treaty area should prevent decrease to levels which would threaten the stable recruitment of species³¹¹, maintain the ecological relationships “between harvested, dependent and related populations of Antarctic marine resources,”³¹² and prevent changes or minimalise the risk of change that are not potentially reversible over two or three decades. This is the first time an international instrument enunciated an ecosystem based precautionary approach to the management of fisheries and in consequence had serious issues in implementation³¹³. It is entirely appropriate that CRATA take its place in the system of similar acronyms that has characterised the ATS.

ASOC identifies the most important first step in this process, “a strategic discussion of tourism developments, and [an] overall tourism policy...”³¹⁴ Decisions must be made by the ATCM parties about the political reality of tourism. They must examine the nature of the growth of tourism³¹⁵, the possible effects, and whether it is feasible to allow the industry to continue to self-regulate and grow. If the industry does continue to grow, it seems inevitable some serious clashes with the Antarctic Treaty

³¹⁰ Davidson J S, ‘The Antarctic legal environment: an Introduction’. (2001) University of Canterbury.

³¹¹ CCAMLR, Article II, paragraph 3 (a).

³¹² CCAMLR, Article II, paragraph 3 (a).

³¹³ D G M Miller, above n 298, 319.

³¹⁴ IWC Report XXX, Annex G, “ASOC Report on the XXX ATCM.” (2007).

³¹⁵ P B Davis, ‘Beyond guidelines a model for Antarctic tourism’, (1999) *Annals of Tourism Research* 26 (3), 516.

System will occur³¹⁶. All activities must, under Article 3 of the Protocol, consider the inherent wilderness value of the continent. A wilderness area is defined in The World Conservation Union (IUCN) Framework for Protected Areas as “a large area of unmodified or slightly modified land and/or sea, retaining its natural character and influence, which is protected and managed so as to preserve its natural condition”.³¹⁷ With an exponential increase in tourist numbers, the threat to this value, as well as to the aesthetic value and scientific utility increases. A permanent land based venture may even challenge the peaceful use of the continent and seriously threaten continued stability in the region³¹⁸. The Antarctic Treaty Parties must make a value based decision and although the data is relevant, the science cannot determine whether nations decide to diverge from the path set in the Environmental Protocol. However, if Parties wish activities to remain consistent with a continent devoted to peace and science, some form of regulation is necessary. The instrument should form a Secretariat that should be designed to work closely with IAATO.

B. Convention for the Regulation of Antarctic Treaty Activities (CRATA)

The regulation of whale watching should form part of an Annex to this instrument giving consideration to tourist interaction with Antarctic flora and fauna and importantly note its adherence to the rights and responsibilities laid out in the ICRW³¹⁹. The form of the instrument should closely follow the CCAMLR model,

³¹⁶ ASOC, ‘The Case for Concern about Antarctic Tourism.’ (2004) Information Paper from ATME 2004.

³¹⁷ R A Mittermeier, C G Mittermeier, T M Brooks, J D Pilgrim, W R Konstant, G A B da Fonseca, and C Kormos, ‘Wilderness and biodiversity conservation’, (2003) *Proceedings of the National Academy of Sciences of the USA*, 100(2).

³¹⁸ ASOC ‘Large Scale Antarctic Tourism.’ (1999) Information Paper for the XXIII ATCM.

³¹⁹ A draft CRATA is included in Appendix 8.

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particularly in terms of the Commission and Scientific Committee composition. The new Scientific Committee should be able to draw together research about Tourism in the Southern Ocean and form more powerful conclusions. An important addition should be a permitting requirement forcing member states to apply for permits on behalf of national operators. The relatively small nature of the industry should mean the process is not too difficult to control and once implemented, the permit system should control the growth of the industry. Furthermore, permitting is already practised in a routine manner by the industry in order to visit Antarctic Specially Protected Areas, protected under the treaty.

The organisation is designed to closely work with the IWC Scientific Committee in collecting data and remaining consistent with the provisions. There is a clear conflict with the IWC In order to give the industry a feeling of ownership, the guideline provisions should be drawn from the IAATO Marine Wildlife Watching Guidelines and the Annex refers to Guidelines the Scientific committee must draw up based on the industry and best scientific knowledge. The IAATO Guidelines are sufficient for the cause and allow the industry to work closely with the Scientific Committee.

Conservation measures allow the Commission to close certain areas that are met with significant damage. An important element of the treaty making process will be to keep the industry onside. They may form a major bloc and considering the immense power they possess in the current system, it may be difficult to control the quickly growing organisation.

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Due to the high level of non-Contracting Party flag states within the IAATO membership³²⁰, it is highly recommended that Port State measures are adopted and encouraged throughout the Convention. A major problem with many international marine legal instruments is reliance on flag state compliance³²¹. Reflagging to avoid complying with an international instrument is a very common occurrence. A significant proportion of all IAATO members are not flagged to a Consultative Party to the Environmental Protocol.

Furthermore, the observation and inspection regime system set up in CCAMLR should be incorporated into CRATA. With a stringent observation and inspection regime, non permitted groups can be better identified and isolated at Commission meetings. It is recommended a “Limit of Acceptable Change model” (LAC) be accepted by the Commission as a method to determine quota systems. A LAC model accepts that use will produce impacts and allows a certain level of impact within a particular environment setting³²². Nine steps are undertaken to gather information and provide guidance in decision making³²³.

Step	
1	Identify area specific issues and concerns.
2	Define and describe opportunity classes.
3	Select indicators of resource and social concerns.
4	Inventory existing resource and social concerns.
5	Specify standards for resource and social indicators.
6	Identify alternative opportunity class allocations.
7	Identify management actions for each alternative.
8	Evaluate and select a preferred alternative.
9	Implement actions and monitor.

³²⁰ See Figure 13.

³²¹ P W Birnie and A E Boyle, *International Law and the Environment* (2nd ed, 2002), 678.

³²² P B Davis, above n 315.

³²³ See Figure 14.

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Figure 14: Nine steps in Environmental Control: A Limits of Acceptable Change Model³²⁴

Education should also play a major role in any whale watching activity and should be explicitly identified in the Convention. Most IAATO cruises follow the Lindblad model and make education a focus of the tourist experience³²⁵. However, the importance of enforcing an educational component to the activity is highlighted by increasingly larger cruises lacking capacity to provide adequate levels of education³²⁶.

Perhaps most importantly, the new Convention should explicitly recognise and allow for ethical debate. Critics have strongly accused moratorium supporters of utilizing scientific uncertainty to undermine the Scientific Committee's proposals, while justifying their actions on ethical and moral issues behind closed doors³²⁷. "[M]any protectionists re more than reluctant to change their rhetoric from an ecological discourse to animal welfare or animal rights arguments."³²⁸ There are good reasons to distinguish whales and dolphins as animals with higher cognitive abilities³²⁹ and worthy of a greater consideration under the law. These should be examined in greater detail, certainly given the growing global consciousness to affording the great apes certain implicit rights under the legal system³³⁰. Section 85 of the Animal Welfare Act

³²⁴ From P B Davis, 'Beyond guidelines a model for Antarctic tourism', (1999) *Annals of Tourism Research* 26 (3), 516.

³²⁵ R Williams and K Crosbie, above n 12, 3.

³²⁶ ASOC. 'Regulating Commercial Tourism in Antarctica: The Policy Issues,' Information Paper from ATCM XXVI (2003).

³²⁷ M Heazle, above n 14, 174; D S Butterworth, 'Science and Sentimentality,' 1992 *Nature* 357, 532; A Kalland. 'Super Whale: The Use of Myths and Symbols in Environmentalism.' (1994) *11 Essays on Whale and Man* [A High North Publication], 167; S Suhre, above n 15; B T Hodges, above n 10.

³²⁸ A Kalland. Above n 327.

³²⁹ A D'Amato and S K Chopra, above n 17; A Gillespie, above n 7.

³³⁰ P Brosnahan 'New Zealand's Animal Welfare Act: What is It's Value Regarding The Great Apes,' (2000) 6 *Animal Law* 185, 186.

1999 prohibits research or testing on non-human hominids³³¹ unless it can benefit the individual hominid or hominid species³³². Similar legislation and regulations have emerged in Austria, the Netherlands and Sweden, and no new licences to test on non-human hominids have been granted in the United Kingdom since 1998³³³. The position of the world community towards whales has been influenced by economic concerns, benefits for environmental organisations and underlying political motivations, however there has been an emerging ethic of a higher level of respect. This respect is the subject that must be debated and analysed as much as the data surrounding it; whether it can be consistent with current attitudes towards animals and what approach the entire commission should take.

7. Conclusion

In 1997, the Irish Delegation proposed a new way forward for the International Whaling Commission. The high seas would be considered a global sanctuary, but coastal whaling should be allowed under the Revised Management Schedule. The International Convention on the Regulation of Whaling would be used to utilize the high seas stocks in a non-lethal fashion through the effective regulation of activities like whale watching. Gillespie³³⁴ discusses the rationale for this and concludes

³³¹ Otherwise known as the great apes; chimpanzees (*pan troglodytes*), bonobos (*pan paniscus*) gorillas (*gorilla gorilla*), and orangatans (*pongo pygamaeus*), generally accepted as humans closest relatives to our species, or who we share the nearest common ancestor with. P Cavalieri, P Singer, *et al*, 'A Declaration on Great Apes,' in P Cavaliera and P Singer (eds.), *The Great Ape Project: Equality Beyond Humanity* (1996), 5.

³³² Section 85 *Animal Welfare Act 1999*.

³³³ S Connor. "Scientists 'should be allowed to test on apes'", *The Independent*, June 3, 2006.

³³⁴ A Gillespie, above n 7, 186.

“conventional development paradigms can quite legitimately be discarded, if the signatories to the Convention have a broader vision they wish to adopt.”³³⁵ However, the proposal has been continually sidelined by the polarisation of the IWC. Both Australia and Norway have opposed the plans, from opposite sides of the argument³³⁶.

The ethical issues at play in the Whaling Commission are complex and there is little doubt that some ethical considerations are governing some anti-whaling countries actions. Yet, these have been largely cloaked by a reliance on the uncertainty of science. On one side is a belief in the “rat” like quality of whales and the cultural imperialism of the other side, on the other words like “sentient being” are used, alongside “murderer”³³⁷. However, ethical opinions about whales can be justified without recourse to meaningless cultural imperialism. The extension of some form of rights to animals with higher cognitive capacity is growing in various legal systems around the world³³⁸ and there are strong arguments that all cetaceans should have some form of personality under the law³³⁹. It is important there is a platform for these debates to occur, and a new instrument provides a powerful opportunity to exorcise these issues.

Moreover, whale watching needs regulation. Human interaction with whales, from direct slaughter, to pollution, climate change and fishing remains at unknown and potentially devastating levels. Membership to IAATO and consequentially, tourist

³³⁵ Ibid.

³³⁶ Ibid.

³³⁷ M Heazle, above n 14, 172.

³³⁸ R Taylor, ‘A Step at a Time: New Zealand’s Progress Towards Hominid Rights.’ (2001) 7 *Animal Law* 35.

³³⁹ ³³⁹ A D’Amato and S K Chopra, above n 17, 27.

numbers are increasing at a rate that not even ASOC has forecast³⁴⁰. The areas focussed on by operators could have significant cumulative impacts, and without concerted study and a regulatory framework, not enough can be known about baselines to protect the populations. The IAATO Marine Wildlife Watching Guidelines (Whales, Dolphins, Seals and Seabirds) for Vessel and Zodiac Operations are some of the most effective in the world, exceeding the ideal standards suggested by the IWC. However, they are only Guidelines, no real approximation of compliance can be made and the steady growth of the industry towards bigger and less efficient ships may draw the focus of the organisation away from sustainability. Controlled ecotourism can only occur with controlled and slow growth through active management³⁴¹.

The most effective measure to challenge this is the negotiation of a new instrument for the Antarctic Treaty System to regulate Tourist Activities. As an Annex to this instrument, guidelines for whale watching activities should be produced and certain minimum standards maintained. Alexander Gillespie sums up with these words, “if you want to try and protect whales, be aware the debate is about ethics, politics and law. Only when all three of these overlapping considerations are fully factors into the equation, will there be a meaningful understanding of this debate.”³⁴² The regulation of whale watching is an ideal stage to both conserve populations in an economically beneficial manner and confront more general ethical and political issues underlying the whaling debate.

³⁴⁰ ASOC. ‘Strategic Issues posed by Commercial Tourism in the Antarctic Treaty area,’ Information Paper from ATCM XXVI (2003).

³⁴¹ Bosselman, F P, C A Peterson and C McCarthy, above n 272.

³⁴² A Gillespie, above n 7, 484.

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Whale Protection Act 1980 (Australia).

Appendix 1: Resolution on the Non-Lethal Use of Cetaceans from IWC.
Annual Report of the Whaling Commission (2007).

Resolution 2007-3

RESOLUTION ON THE NON-LETHAL USE OF CETACEANS

RECALLING the objective of the 1946 International Convention for the Regulation of Whaling to safeguard the natural resources represented by whale stocks for the benefit of future generations;

NOTING that many coastal States, including developing countries, have adopted policies of non-lethal use of cetaceans in the waters under their jurisdiction, in accordance with their sovereign rights reinforced by, *inter alia*, the United Nations Convention on the Law of the Sea (UNCLOS) and the Rio Declaration;

AWARE that most whale species are highly migratory and thus shared biodiversity resources;

CONCERNED that negotiations aimed at resolving the impasses at the International Whaling Commission must address the issue of non-lethal use to take into account the interests of a substantial portion of IWC membership;

NOTING that, under domestic management by coastal States, non-lethal utilization of whales is a rapidly growing activity that provides substantial socio-economic opportunities, including promoting employment in coastal communities, especially in developing countries;

NOTING FURTHER that the moratorium on commercial whaling has been in effect since 1986 and has contributed to the recovery of some cetacean populations essential for the promotion of non-lethal uses in many countries;

CONCERNED that whales in the 21st Century face a wider range of threats than those envisaged when the ICRW was concluded in 1946;

NOTING that the Buenos Aires Declaration states that “high quality and well managed implementation of whale watching tourism promotes economic growth and social and cultural development of local communities, bringing educational and scientific benefits, whilst contributing to the protection of cetacean populations”;

NOW THEREFORE THE COMMISSION:

RECOGNISES the valuable benefits that can be derived from the non-lethal uses of cetaceans as a resource, both in terms of socio-economic and scientific development;

RECOGNISES non-lethal use as a legitimate management strategy;

ENCOURAGES member States to work constructively towards the incorporation of the needs of non-lethal users of whale resources in any future decisions and agreements.

IWC59\Resolution 2007-3 1 04/06/07

Appendix 2: Requirements for a Comprehensive Environmental Evaluation from Environmental Protocol, Annex I, Article 3.2

A Comprehensive Environmental Evaluation shall include:

- A description of the proposed activity including its purpose, location, duration and intensity, and possible alternatives to the activity, including not proceeding, and the consequences of those alternatives;
- A description of the initial environmental reference state with which predicated changes are to be compared and a prediction of the future environmental reference state in the absence of the proposed activity;
- A description of the methods and data used to forecast the impacts of the proposed activity;
- Estimation of the nature, extent, duration, and intensity of the likely direct impacts of the proposed activity;
- Consideration of possible indirect or second-order impacts of the proposed activity;
- Consideration of cumulative impacts of the proposed activity in the light of existing activities and other known planned activities;
- Identification of measures, including monitoring programmes, that could be taken to minimise or mitigate impacts of the proposed activity and detect unforeseen impacts, and that could provide early warning of any adverse effects of the activity as well as to deal promptly and effectively with accidents;
- Identification of unavoidable impacts of the proposed activity;
- Consideration of the effects of the proposed activity on the conduct of scientific research and on other existing uses and values;
- An identification of gaps in knowledge and uncertainties encountered in compiling the information required under this paragraph;
- A non technical summary of the information provided under this paragraph; and
- The name and address of the person or organisation which prepared the comprehensive environmental evaluation and the address to which comments thereon should be directed.

Appendix 3: IAATO Guidelines for Tour Operators
<http://www.iaato.org/guidelines.html>

Key Obligations On Organisers and Operators

1. Provide prior notification of, and reports on, their activities to the competent authorities of the appropriate Party or Parties.
2. Conduct an assessment of the potential environmental impacts of their planned activities.
3. Provide for effective response to environmental emergencies, especially with regard to marine pollution.
4. Ensure self-sufficiency and safe operations.
5. Respect scientific research and the Antarctic environment, including restrictions regarding protected areas, and the protection of flora and fauna.
6. Prevent the disposal and discharge of prohibited waste.

Procedures to be Followed by Organisers and Operators

A. When planning to go to the Antarctic - Organisers and operators should:

1. Notify the competent national authorities of the appropriate Party or Parties of details of their planned activities with sufficient time to enable the Party(ies) to comply with their information exchange obligations under Article VII(5) of the Antarctic Treaty. The information to be provided is listed in Attachment A.
2. Conduct an environmental assessment in accordance with such procedures as may have been established in national law to give effect to Annex I of the Protocol, including, if appropriate, how potential impacts will be monitored.
3. Obtain timely permission from the national authorities responsible for any stations they propose to visit.
4. Provide information to assist in the preparation of: contingency response plans in accordance with Article 15 of the Protocol; waste management plans in accordance with Annex III of the Protocol; and marine pollution contingency plans in accordance with Annex IV of the Protocol.
5. Ensure that expedition leaders and passengers are aware of the location and special regimes which apply to Specially Protected Areas and Sites of Special Scientific Interest (and on entry into force of the Protocol, Antarctic Specially Protected Areas and Antarctic Specially Managed Areas) and of Historic Sites and Monuments and, in particular, relevant management plans.
6. Obtain a permit, where required by national law, from the competent national authority of the appropriate Party or Parties, should they have a reason to enter such areas, or a monitoring site (CEMP Site) designated under CCAMLR.
7. Ensure that activities are fully self-sufficient and do not require assistance from Parties unless arrangements for it have been agreed in advance.
8. Ensure that they employ experienced and trained personnel, including a sufficient number of guides.
9. Arrange to use equipment, vehicles, vessels, and aircraft appropriate to Antarctic operations.

10. Be fully conversant with applicable communications, navigation, air traffic control and emergency procedures.
11. Obtain the best available maps and hydrographic charts, recognising that many areas are not fully or accurately surveyed.
12. Consider the question of insurance (subject to requirements of national law).
13. Design and conduct information and education programmes to ensure that all personnel and visitors are aware of relevant provisions of the Antarctic Treaty system.
14. Provide visitors with a copy of the Guidance for Visitors to the Antarctic.

B. When in the Antarctic Treaty Area - Organisers and operators should:

1. Comply with all requirements of the Antarctic Treaty system, and relevant national laws, and ensure that visitors are aware of requirements that are relevant to them.
2. Reconfirm arrangements to visit stations 24-72 hours before their arrival and ensure that visitors are aware of any conditions or restrictions established by the station.
3. Ensure that visitors are supervised by a sufficient number of guides who have adequate experience and training in Antarctic conditions and knowledge of the Antarctic Treaty system requirements.
4. Monitor environmental impacts of their activities, if appropriate, and advise the competent national authorities of the appropriate Party or Parties of any adverse or cumulative impacts resulting from an activity, but which were not foreseen by their environmental impact assessment.
5. Operate ships, yachts, small boats, aircraft, hovercraft, and all other means of transport safely and according to appropriate procedures, including those set out in the Antarctic Flight Information Manual (AFIM).
6. Dispose of waste materials in accordance with Annex III and IV of the Protocol. These annexes prohibit, among other things, the discharge of plastics, oil and noxious substances into the Antarctic Treaty Area; regulate the discharge of sewage and food waste; and require the removal of most wastes from the area.
7. Co-operate fully with observers designated by Consultative Parties to conduct inspections of stations, ships, aircraft and equipment under Article VII of the Antarctic Treaty, and those to be designated under Article 14 of the Environmental Protocol.
8. Co-operate in monitoring programmes undertaken in accordance with Article 3(2)(d) of the Protocol.
9. Maintain a careful and complete record of their activities conducted.

C. On completion of the activities

Within three months of the end of the activity, organisers and operators should report on the conduct of it to the appropriate national authority in accordance with national laws and procedures. Reports should include the name, details and state of registration of each vessel or aircraft used and the name of their captain or commander; actual itinerary; the number of visitors engaged in the activity; places, dates and purposes of landings and the number of visitors landed on each occasion; any meteorological observations made, including those made as part of the World Meteorological

Organization (WMO) Voluntary Observing Ships Scheme; any significant changes in activities and their impacts from those predicted before the visit was conducted; and action taken in case of emergency.

D. Antarctic Treaty System Documents and Information

Most Antarctic Treaty Parties can provide, through their national contact points, copies of relevant provisions of the Antarctic Treaty system and information about national laws and procedures, including:

- The Antarctic Treaty (1959)
- Convention on the Conservation of Antarctic Marine Living Resources (1980)
- Protocol on Environmental Protection to the Antarctic Treaty (1991)
- Recommendations and other measures adopted under the Antarctic Treaty
- Final Reports of Consultative Meetings
- Handbook of the Antarctic Treaty System (1994)
- Handbook of the Antarctic Treaty System (in Spanish, 1991)

Appendix 4: New Zealand Whale Watching Regulations 1992.

THE MARINE MAMMALS PROTECTION REGULATIONS 1992

CATHERINE A. TIZARD, Governor-General

ORDER IN COUNCIL

At Wellington this 16th day of November 1992

Present:

Her Excellency the Governor-General in Council

PURSUANT to section 28 of the Marine Mammals Protection Act 1978, Her Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following regulations.

ANALYSIS

1. Title and commencement
2. Interpretation
3. Application
4. Purpose

PART I

REQUIREMENTS RELATING TO PERMITS

5. Commercial operations carried on without permit prohibited
6. Criteria for issuing permits
7. Requirements to be satisfied before permit for commercial vessel operation issued
8. Requirements to be satisfied before permit for commercial aircraft operation issued
9. Requirements to be satisfied before permit for commercial shore-based operation issued
10. Requirements to be satisfied before permit issued
11. Advertising applications
12. Permits

PART II

SUSPENSION, REVOCATION, RESTRICTION, OR AMENDMENT OF PERMITS

13. Suspension, revocation, restriction, or amendment of permits
14. Transfer of permits
15. Director-General may decline to grant permits during specified period
16. Rights of appeal

PART III

BEHAVIOUR AROUND MARINE MAMMALS

17. Application of this Part
18. Conditions governing commercial operations and behaviour of all

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- persons around any marine mammal
- 19. Special conditions applying to whales
- 20. Special conditions applying to dolphins or seals

PART IV MISCELLANEOUS PROVISIONS

- 21. Transitional provisions
- 22. Regulations revoked

REGULATIONS

1. Title and commencement---(1) These regulations may be cited as the Marine Mammals Protection Regulations 1992.

(2) These regulations shall come into force on the 1st day of January 1993.

2. Interpretation---In these regulations, unless the context otherwise requires,---

``The Act" means the Marine Mammals Protection Act 1978:

``Commercial aircraft operation" means a commercial operation using any aircraft (as defined in section 2 of the Civil Aviation Act 1990):

``Commercial operator" means a person who carries on a commercial operation:

``Commercial operation" or ``operation" means an operation carried on for any form of hire or reward in which persons are transported, conveyed, conducted, or guided where a purpose is to view or come into contact with any marine mammal in New Zealand or in New Zealand fisheries waters:

``Commercial shore-based operation" means a commercial operation that does not use any aircraft or vessel:

``Commercial vessel operation" means a commercial operation using any vessel (being a ship as defined in section 2 (1) of the Shipping and Seamen Act 1952) or hovercraft:

``Contact", in relation to a marine mammal, includes any interaction involving a person and the mammal that is likely to produce an effect on the mammal:

``Director-General" means the Director-General of Conservation:

``Dolphin" means---

(a) All species commonly known as dolphins; and includes dusky dolphins, common dolphins, bottlenose dolphins, and Hector's dolphins; but

(b) Does not include the species known as killer whales and pilot whales:

``Harass" includes to do any act that---

(a) Causes or is likely to cause injury or distress to any

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marine mammal; or

(b) Disrupts significantly or is likely to disrupt significantly the normal behavioural patterns of any marine mammal:

``Permit" means a permit issued under regulation 12 of these regulations:

``Seal" means all species commonly known as seals and sea lions; and includes New Zealand fur seals, leopard seals, southern elephant seals, and Hooker's sea lions:

``Whale" means all species commonly known as whales; and includes baleen whales, sperm whales, beaked whales, killer whales, and pilot whales:

``Working day" means any day except---

(a) A Saturday, a Sunday, Good Friday, Easter Monday, Anzac Day, Labour Day, the Sovereign's birthday, and Waitangi Day; and

(b) A day in the period commencing with the 20th day of December in any year and ending with the 15th day of January in the following year.

3. Application---(1) These regulations shall apply throughout New Zealand and New Zealand fisheries waters.

(2) Nothing in these regulations applies in respect of any fishing vessel while the vessel is engaged in commercial fishing (as defined in section 2 (1) of the Fisheries Act 1983), unless---

(a) The vessel is also engaged in a commercial operation; or

(b) The vessel deviates off course to engage in recreational viewing of marine mammals.

PART I REQUIREMENTS RELATING TO PERMITS

5. Commercial operations carried on without permit prohibited---No commercial operator shall carry on any commercial operation, except pursuant to a permit issued by the Director-General under regulation 12 of these regulations.

6. Criteria for issuing permits---Before issuing a permit, the Director-General shall be satisfied that there is substantial compliance with the following criteria:

(a) That the commercial operation should not be contrary to the purposes and provisions of the Act:

(b) That the commercial operation should not be contrary to the purposes and provisions of general policy statements approved under section 3B of the Act, conservation management strategies

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approved under section 3C of the Act, or conservation management plans approved under section 3D of the Act:

- (c) That the commercial operation should not have any significant adverse effect on the behavioural patterns of the marine mammals to which the application refers, having regard to, among other things, the number and effect of existing commercial operations:
- (d) That it should be in the interests of the conservation, management, or protection of the marine mammals that a permit be issued:
- (e) That the proposed operator, and such of the operator's staff who may come into contact with marine mammals, should have sufficient experience with marine mammals:
- (f) That the proposed operator, and such of the operator's staff who may come into contact with marine mammals, should have sufficient knowledge of the local area and of sea and weather conditions:
- (g) That the proposed operator, and such of the operator's staff who may come into contact with marine mammals, should not have convictions for offences involving the mistreatment of animals:
- (h) That the commercial operation should have sufficient educational value to participants or to the public.

7. Requirements to be satisfied before permit for commercial vessel operation issued---Every applicant for a permit for a commercial vessel operation shall submit to the Director-General for approval an application in writing setting out the following:

- (a) Details of the proposed operation, including---
 - (i) The type and number of vessels intended for use; and
 - (ii) Any known information relating to the noise level of each vessel both above and below the sea; and
 - (iii) The proposed area of operation, including a map showing the boundaries of the proposed area of operation and, where appropriate, the specific locations where contact with marine mammals is proposed:
 - (iv) The maximum number of vessels the operator proposes to operate at any one time:
 - (v) The proposed base of operation:
 - (vi) The duration of trips proposed:
 - (vii) The frequency of trips proposed:
 - (viii) The proposed kind of contact with marine mammals:
 - (ix) The maximum numbers of passengers intended to be taken at any one time:
 - (x) The species of marine mammals with which the operation will have contact:
 - (xi) The masters proposed to be engaged in the commercial operation:
- (b) The experience with marine mammals of the proposed operator and such of the operator's proposed staff who may come into contact with marine mammals:

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- (c) The knowledge of the local area and sea conditions of the proposed operator and such of the operator's proposed staff who may come into contact with marine mammals:
- (d) The details of any convictions of the proposed operator and of those employees of the operator who may come into contact with marine mammals, for offences against the Act or any other Act involving the mistreatment of animals:
- (e) The details of any educational material to be provided or educational aspects of the proposed operation.

8. Requirements to be satisfied before permit for commercial aircraft operation issued---Every applicant for a permit for a commercial aircraft operation shall submit to the Director-General for approval an application setting out the following:

- (a) The details of the proposed operation, including---
 - (i) The type and the number of aircraft intended for use; and
 - (ii) Any known information relating to the the noise level of each aircraft both above and below the sea; and
 - (iii) The proposed area of operation, including a map showing the boundaries of the proposed area of operation and, where appropriate, the specific locations where contact with marine mammals is proposed:
 - (iv) The maximum number of aircraft proposed to be operating at any one time:
 - (v) The proposed base of operation:
 - (vi) The duration of trips proposed:
 - (vii) The frequency of trips proposed:
 - (viii) The maximum number of passengers to be carried on the aircraft at any one time:
 - (ix) The species of marine mammals with which the operation will have contact:
 - (x) The names of the pilots proposed to be engaged in the commercial aircraft operation:
- (b) The experience with marine mammals of the proposed operator and such of the operator's proposed staff who may come into contact with marine mammals:
- (c) The knowledge of the local area and weather conditions of the proposed operator and such of the operator's proposed staff who may come into contact with marine mammals:
- (d) The details of any convictions of the proposed operator and of those employees of the operator who may come into contact with marine mammals, for offences against the Act or any other Act involving the mistreatment of animals:
- (e) The details of any educational material to be provided or educational aspects of the proposed operation:
- (f) The number of the air service certificate or other aviation document under which the aircraft will be operating.

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9. Requirements to be satisfied before permit for commercial shore-based operation issued---Every applicant for a permit for a commercial shore-based operation shall submit to the Director-General for approval an application setting out, where applicable, the following:

- (a) The details of the proposed operation, including---
 - (i) The type and number of vehicles intended to be used; and
 - (ii) The proposed area of operation, including a map showing the boundaries of the proposed area of operation and, where appropriate, the specific locations where contact with marine mammals is proposed:
 - (iii) The proposed guides:
 - (iv) The maximum number of vehicles the operator proposes to operate at any one time:
 - (v) The proposed route of persons to be guided to the colony of marine mammals:
 - (vi) The proposed base of operation:
 - (vii) The duration of trips proposed:
 - (viii) The frequency of trips proposed:
 - (ix) The proposed kind of contact the operation will have with marine mammals:
 - (x) The species of marine mammals with which the operation will have contact:
 - (xi) The maximum number of persons intended to be taken at any one time:
- (b) The experience with marine mammals of the proposed operator and such of the operator's proposed staff who may come into contact with marine mammals:
- (c) The details of any convictions of the proposed operator and of those employees of the operator who may come into contact with marine mammals, for offences against the Act or any other Act involving the mistreatment of animals:
- (d) The details of any educational material to be provided or educational aspects of the proposed operation.

10. Requirements to be satisfied before permit issued---(1) Before issuing a permit, the Director-General shall determine whether or not the application by the proposed operator is acceptable to him or her and the Director-General may require the application to be amended by the proposed operator to incorporate such matters as the Director-General may specify in writing.

(2) Once the application is approved, it shall be deemed to form part of the permit issued in respect of the application and shall be complied with accordingly.

11. Advertising applications---(1) Before granting a permit for a commercial operation, the Director-General shall require the applicant,

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at the applicant's own expense, to advertise details of the application in a form agreed by the Director-General and in such newspapers as may be agreed by the Director-General.

(2) The advertisement shall set out such details of the proposed operation as required by the Director-General, the name and address of the applicant, and shall call for submissions within 20 working days after publication of the notice.

(3) Submissions shall be sent to the Director-General at such place as the Director-General may specify in the notice; and the Director-General shall send to the applicant a copy of every submission received in respect of the applicant's proposed operation.

(4) The applicant shall make any comments on the submissions to the Director-General within 10 working days after the receipt of submissions.

(5) Before deciding whether or not to grant a permit for any commercial operation, the Director-General shall consider every submission received under this regulation in respect of the proposed operation and the comments received under subclause (4) of this regulation.

12. Permits---(1) Subject to these regulations, the Director-General, on receiving an application made in writing, may issue a permit authorising any commercial operator to carry on any specified commercial operation.

(2) Every permit issued to a commercial operator shall, where appropriate, specify the following:

- (a) The type of aircraft and vessels to be used by the operator;
- (b) The names of the pilots of aircraft, the masters of vessels, and guides engaged in the commercial operation;
- (c) The land and any area of water to which it relates;
- (d) That all aircraft and vessels operated under the permit, and their pilots and masters, respectively, must meet the statutory requirements relating to the licensing and safety of the aircraft and vessels and the qualifications and licensing of the pilots and masters, as the case may require.

(3) The Director-General shall not issue a permit unless he or she is satisfied---

- (a) That the proposed commercial operation will not have or be likely to have any adverse effect on the conservation, protection, or management of marine mammals; and
- (b) That the criteria specified in regulation 6 of these regulations have been substantially complied with; and
- (c) That sufficient information has been received by the

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Director-General in respect of the application under regulation 7 or regulation 8 or regulation 9 of these regulations.

(4) The Director-General may issue a permit for any period of time not exceeding 10 years and may renew the permit from time to time.

(5) The Director-General shall, where appropriate, issue to every commercial operator issued with a permit a label identifying each aircraft or vessel as operating under a valid permit. Each label shall be affixed at all times to the aircraft or vessel, as the case may be.

PART II

SUSPENSION, REVOCATION, RESTRICTION, OR AMENDMENT OF PERMITS

13. Suspension, revocation, restriction, or amendment of permits---(1) The Director-General may at any time suspend or revoke any permit, or restrict the operation authorised by any permit, where the holder---

- (a) Is convicted of any offence against the Act or is convicted under any other Act of any offence involving the mistreatment of animals; or
- (b) Contravenes or fails to comply with any statutory requirement relating to the licensing, operation, and safety of any aircraft or vessel used by the person carrying on the commercial operation; or
- (c) Carries on a commercial operation without an appropriately licensed aircraft pilot or crew, or certificated master; or
- (d) Contravenes or fails to comply with any condition or requirement specified or notified under Part III of these regulations or specified in the permit.

(2) Where the Director-General believes on reasonable grounds that it is necessary for the protection, conservation, or management of any marine mammal or marine mammals of any class, he or she may---

- (a) Suspend, revoke, or amend (in a manner not inconsistent with Part III of these regulations) any permit or permits:
- (b) Restrict in whole or in part the operation authorised by any permit or permits.

(3) Where any person ceases to be a commercial operator, the Director-General may suspend or revoke that person's permit.

(4) Every suspension of a permit under this regulation shall be for such period as the Director-General specifies by notice in writing to the holder.

(5) The Director-General may, at the request of the commercial operator and if he or she is satisfied that the criteria specified in regulation 6 of these regulations have been substantially complied with,

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amend a permit to allow a change of aircraft or vessel or a change of pilot, master, or guide, as the case may be.

(6) A permit holder shall comply with the advertising requirements in regulation 11 of these regulations with appropriate modifications, where, in the opinion of the Director-General, a major amendment to the permit is sought by the holder.

14. Transfer of permits---(1) No permit for any commercial operation may be transferred from the holder of the permit to any person without first obtaining the consent in writing of the Director-General.

(2) The Director-General may---

- (a) Refuse to consent to the transfer of a permit; or
- (b) Consent to the transfer of a permit either with or without conditions.

(3) Where the holder of a permit is a body corporate, the transfer of control of the management of the holder in whole or in part to another person shall be deemed to be a transfer of the permit.

(4) In considering whether or not to consent to a transfer of a permit the Director-General, shall have regard to the applicable matters contained in regulations 6 to 9 of these regulations.

(5) No permit shall be deemed to allow any person other than the operator specified therein to carry on the commercial operation authorised by the permit.

15. Director-General may decline to grant permits during specified period---(1) Where the Director-General believes on reasonable grounds that it is necessary for the protection, conservation, or management of any marine mammals or any class of marine mammals, he or she may, by notice published in---

- (a) The Gazette; and
- (b) Newspapers circulating in the locality,---

declare that no new permits shall be granted in respect of specified commercial operations during the period specified in the notice.

(2) In considering whether or not to give notice under subclause (1) of this regulation, the Director-General shall have regard to---

- (a) The number and effect of existing commercial operations; and
- (b) Whether or not it is in the interests of the conservation, protection, or management of marine mammals to grant further permits.

(3) A notice under subclause (1) of this regulation may in like manner

be amended or revoked.

16. Rights of appeal---(1) Any commercial operator who makes application to the Director-General for a further permit to renew an existing permit on substantially the same terms and conditions may appeal to the Minister of Conservation against any decision of the Director-General to decline to grant that person a permit; and the Minister may confirm, reverse, or modify the decision appealed against.

(2) Any person may appeal to the Minister of Conservation against the decision of the Director-General to suspend, revoke, restrict, or amend that person's permit; and the Minister may confirm, reverse, or modify the decision appealed against.

PART III BEHAVIOUR AROUND MARINE MAMMALS

17. Application of this Part---Nothing in regulation 18 or regulation 19 or regulation 20 of these regulations shall apply to persons, vessels, aircraft, or vehicles rendering assistance to stranded or injured marine mammals.

18. Conditions governing commercial operations and behaviour of all persons around any marine mammal---Every commercial operation, and every person coming into contact with any class of marine mammal, shall comply with the following conditions:

- (a) Persons shall use their best endeavours to operate vessels, vehicles, and aircraft so as not to disrupt the normal movement or behaviour of any marine mammal:
- (b) Contact with any marine mammal shall be abandoned at any stage if it becomes or shows signs of becoming disturbed or alarmed:
- (c) No person shall cause any marine mammal to be separated from a group of marine mammals or cause any members of such a group to be scattered:
- (d) No rubbish or food shall be thrown near or around any marine mammal:
- (e) No sudden or repeated change in the speed or direction of any vessel or aircraft shall be made except in the case of an emergency:
- (f) Where a vessel stops to enable the passengers to watch any marine mammal, the engines shall be either placed in neutral or be switched off within a minute of the vessel stopping:
- (g) No aircraft engaged in a commercial aircraft operation shall be flown below 150 metres (500 feet) above sea level, unless taking off or landing:
- (h) When operating at an altitude of less than 600 metres (2000 feet) above sea level, no aircraft shall be closer than 150 metres

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(500 feet) horizontally from a point directly above any marine mammal or such lesser or greater distance as may be approved by the Director-General, by notice in the Gazette, from time to time based on the best available scientific evidence:

- (i) No person shall disturb or harass any marine mammal:
- (j) Vehicles must remain above the mean high water spring tide mark and shall not approach within 50 metres of a marine mammal unless in an official carpark or on a public or private slipway or on a public road:
- (k) No person, vehicle, or vessel shall cut off the path of a marine mammal or prevent a marine mammal from leaving the vicinity of any person, vehicle, or vessel:
- (l) Subject to paragraph (m) of this regulation, the master of any vessel less than 300 metres from any marine mammal shall use his or her best endeavours to move the vessel at a constant slow speed no faster than the slowest marine mammal in the vicinity, or at idle or "no wake" speed:
- (m) Vessels departing from the vicinity of any marine mammal shall proceed slowly at idle or "no wake" speed until the vessel is at least 300 metres from the nearest marine mammal, except that, in the case of dolphins, vessels may exceed idle or "no wake" speed in order to outdistance the dolphins but must increase speed gradually, and shall not exceed 10 knots within 300 metres of any dolphin:
- (n) Pilots of aircraft engaged in a commercial aircraft operation shall use their best endeavours to operate the aircraft in such a manner that, without compromising safety, the aircraft's shadow is not imposed directly on any marine mammal.

19. Special conditions applying to whales---In addition to complying with the provisions set out in regulation 18 of these regulations, every commercial operation and every person coming into contact with whales shall also comply with the following conditions:

- (a) No person in the water shall be less than 100 metres from a whale, unless authorised by the Director-General:
- (b) No vessel shall approach within 50 metres of a whale, unless authorised by the Director-General:
- (c) If a whale approaches a vessel, the master of the vessel shall, wherever practicable,---
 - (i) Manoeuvre the vessel so as to keep out of the path of the whale; and
 - (ii) Maintain a minimum distance of 50 metres from the whale:
- (d) No vessel or aircraft shall approach within 300 metres (1000 feet) of any whale for the purpose of enabling passengers to watch the whale, if the number of vessels or aircraft, or both, already positioned to enable passengers to watch that whale is 3 or more:
- (e) Where 2 or more vessels or aircraft approach an unaccompanied whale, the masters concerned shall co-ordinate their approach

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and manoeuvres, and the pilots concerned shall co-ordinate their approach and manoeuvres:

- (f) No person or vessel shall approach within 200 metres of any female baleen or sperm whale that is accompanied by a calf or calves:
- (g) A vessel shall approach a whale from a direction that is parallel to the whale and slightly to the rear of the whale:
- (h) No person shall make any loud or disturbing noise near whales:
- (i) Where a sperm whale abruptly changes its orientation or starts to make short dives of between 1 and 5 minutes duration without showing its tail flukes, all persons, vessels, and aircraft shall forthwith abandon contact with the whale.

20. Special conditions applying to dolphins or seals---In addition to complying with the conditions set out in regulation 18 of these regulations, any commercial operation and any person coming into contact with dolphins or seals shall also comply with the following conditions:

- (a) No vessel shall proceed through a pod of dolphins:
- (b) Persons may swim with dolphins and seals but not with juvenile dolphins or a pod of dolphins that includes juvenile dolphins:
- (c) Commercial operators may use an airhorn to call swimmers back to the boat or to the shore:
- (d) Except as provided in paragraph (c) of this regulation, no person shall make any loud or disturbing noise near dolphins or seals:
- (e) No vessel or aircraft shall approach within 300 metres (1000 feet) of any pod of dolphins or herd of seals for the purpose of enabling passengers to watch the dolphins or seals, if the number of vessels or aircraft, or both, already positioned to enable passengers to watch that pod or herd is 3 or more:
- (f) Where 2 or more vessels or aircraft approach an unaccompanied dolphin or seal, the masters concerned shall co-ordinate their approach and manoeuvres, and the pilots concerned shall co-ordinate their approach and manoeuvres:
- (g) A vessel shall approach a dolphin from a direction that is parallel to the dolphin and slightly to the rear of the dolphin.

PART IV MISCELLANEOUS PROVISIONS

21. Transitional provisions---(1) Applications (including amended applications) for permits received before the commencement of these regulations shall be dealt with as if the Marine Mammals Protection Regulations 1990 were still in force.

(2) Applications for permits that are received after the commencement of these regulations shall be dealt with under these regulations.

(3) Permits issued under the Marine Mammals Protection Regulations 1990 shall be subject to regulations 13, 14, 16, 17, 18, 19, and 20 of

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these regulations. The Marine Mammals Protection Regulations 1990 (except regulations 5 (4), 5 (5), 6 (3), 7, 8, and 9) shall continue to apply to such permits as if not revoked, unless inconsistent with these regulations.

22. Regulations revoked---The Marine Mammals Protection Regulations 1990 (S.R. 1990/287) are hereby revoked.

BOB MACFARLANE,
Acting for Clerk of the Executive Council.

EXPLANATORY NOTE

This note is not part of the regulations, but is intended to indicate their general effect.

These regulations, which come into force on 1 January 1993, revoke and replace the Marine Mammals Protection Regulations 1990.

The principal changes effected by these regulations are as follows:

- (a) Regulation 3 provides that the regulations do not apply in respect of a fishing vessel engaged in commercial fishing, unless the vessel is also engaged in a commercial operation as defined in regulation 2 of these regulations or deviates off course to engage in recreational viewing of marine mammals:
- (b) Regulation 4 sets out the purposes of the regulations. The principal purpose is the protection, conservation, and management of marine mammals:
- (c) Regulations 6 to 9 specify the matters the Director-General of Conservation must have regard to when deciding whether or not to grant a permit:
- (d) Regulation 11 requires each applicant for a permit to publicly notify the applicant's application:
- (e) Regulation 16 confers a right of appeal to the Minister of Conservation against the Director-General's refusal to renew an existing permit for an existing permit holder.

Issued under the authority of the Acts and Regulations Publication

Whale Watching in the Southern Ocean

Act 1989.

Date of notification in Gazette: 19 November 1992.

These regulations are administered in the Department of Conservation.

Appendix 5: Resolution on the Non-Lethal Use of Cetaceans from IWC.
Annual Report of the Whaling Commission (1996).

Resolution 1996-2
RESOLUTION ON WHALEWATCHING

RECALLING the resolutions adopted at its 45th and 46th Annual Meetings establishing, *inter alia*, a Working Group to keep under review developments relating to all aspects of whalewatching relevant to the Commission's responsibilities;

WISHING to encourage the development of whalewatching as a sustainable, non-lethal use of cetacean resources;

ACKNOWLEDGING that the development and control of whalewatching is a matter for the coastal states involved;

RECOGNISING the need for precautionary measures to ensure that the continuing development and expected expansion of whalewatching activities do not adversely affect cetacean populations, individual animals, or their environment, or significantly increase the risk to the survival or ecological functioning of such populations;

ACKNOWLEDGING the importance of the contribution which whalewatching makes to education, economic and social development of the wider community, and the advancement of scientific knowledge through well designed research and monitoring programmes;

CONSCIOUS that any guidance which the Commission provides on this matter should be based on the best available scientific information;

RECOGNISING that any guidance on the conduct of whalewatching operations which the Commission may issue may require updating from time to time to reflect advances in scientific knowledge;

APPRECIATING the work of the Scientific Committee in proposing objectives for the management of whalewatching, and general principles to guide the development of whalewatching rules;

NOW, THEREFORE, the Commission

CONSIDERS that the IWC has a continuing part to play in monitoring and providing guidance on the sustainable development of whalewatching;

HAVING ADOPTED the Scientific Committee's recommendations on the general principles for the management of whalewatching (IWC/48/4) recommends that these should be drawn to the attention of coastal states, and encourages such states to take account of these principles in formulating national rules;

ENDORSES the priorities for further work which the Scientific Committee has proposed;

ENCOURAGES countries to provide to the Scientific Committee information on whalewatching activities and the assessment of impacts on cetaceans and their environments;

CONSIDERS that the educational, economic and social development aspects of whalewatching should be further discussed at the 49th Annual Meeting.

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Appendix 6: Critical Response Variables and Management Options to Whale Watching: IWC. *Report on the Workshop on the Science for Sustainable Whales*. (2004).

Critical Response Variables	Management options						
	1. Closures	2. Platform \ permit	3. Platform handling in vicinity of	4. Speed limits /NOT in vicinity of	5. Duration of interactions	6. Limitation on trips	7. Education
Demography							
❖ WW boat strike mortality	a,b	a,b	Y	Y		a,b	a,b,c,d
❖ WW boat strike wounds	a,b	a,b	Y	Y		a,b	a,b,c,d
❖ Changes in reproductive rate	a,b,d,e	a,b	Y	Y	Y	a,b	a,b,c,d
❖ Survivorship of calves/adults	a,b,c,d,e	a,b	Y	Y	Y	a,b	a,b,c,d
❖ Changes in population trend	a,b,c,d,e		Y	Y	Y	a,b	a,b,c,d
Behaviour							
❖ Avoidance behaviour	b,d,e		Y		Y	a,b	a,b,c,d
❖ Attraction behaviour	d,e		Y		Y	a,b	a,b,c,d
❖ Deflection of migration	a,b,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Surface-ventilation- dive characteristics	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Behavioural events	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Swimming behaviour and direction	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Foraging	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Rest time	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Reproductive behaviour							
○ Mating	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
○ Parental care	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Social Behaviour	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Within-school spacing and cohesion of animals	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
Energetics							
❖ Energetic demands	a-e	a,b	Y		Y	a,b	a,b,c,d
❖ Activity states							
❖ Swim speed							
❖ Foraging success							
❖ Body condition							
Physiology of stress							
❖ Stress induced changes in reproductive hormones/fertility/fecundity	a,b,c,d,e	a,b	Y		Y	a,b	a,b,c,d
❖ Body condition							
Acoustics							
❖ Noise related TTS or PTS – temporary or permanent threshold shifts in hearing	a-e	a,b	Y	Y	Y	a,b	a,b,c,d
❖ Impairment of hearing by ambient sound							
❖ Changes in sound production							
Displacement							
Displacement from habitat/distribution changes	a-e	a,b	Y	Y	Y	a,b	a,b,c,d

Key:

1. Closures
 - a. Area
 - b. Season
 - c. Time
 - d. Species
 - e. Whale activity
2. Platform/permit
 - a. Limit number
 - b. Set type
3. Platform handling in vicinity of whales
4. Speed limits while not in the vicinity of whales
5. Duration of interaction
6. Limitation of trips
 - a. Number
 - b. Duration
7. Education
 - a. Operators
 - b. Tourists
 - c. Public
 - d. IUU Operators

Appendix 7: Abbreviated Marine Mammal Guidelines:
<http://www.iaato.org/wildlife.html> at 1 Feb 2008.

<p>Approaching Marine Mammals and Recommended Distances</p> <p>General Principles The animal/s should dictate all encounters. Sometimes an animal will approach a vessel. If a marine mammal wants to interact, it may remain with the vessel. The vessel can then drift passively. If the animal is moving away from the vessel, it is choosing not to interact with or approach the vessel. Take all care to avoid collisions. This may include stopping, slowing down, and/or steering away from the animal/s. Do not chase or pursue animals.</p> <p>The following principles address vessels in general:</p> <p>1a. Vessels, Officers, Crew, Expedition Staff:</p> <ul style="list-style-type: none"> • Keep a good lookout forward (and ideally on the sides and from the stern) where cetaceans may be present. • Always give the animals the benefit of the doubt. • Avoid sudden change in speed and direction (including putting vessel in reverse). • Avoid loud noises, including conversation, whistling, etc. • Should a vessel get closer than the recommended minimum distance, withdraw at a constant, slow, no-wake speed, to at least the recommended minimum distance. • If animals approach the vessel, put engines in neutral and do not re-engage propulsion until they are observed well clear of your vessel. If the animals remain in a local area, and if it is safe to do so, you may shut off the vessel's engine. Some whales will approach a 	<p>1e. Close Approach Procedure for Vessels and/or Zodiacs: <i>Approximately 200 meters/600 feet or closer:</i></p> <ul style="list-style-type: none"> • Approach at no faster than 'no-wake' speed or at idle, whichever is slower. • Approach the animal/s from parallel to and slightly to the rear, e.g. from behind and to one side at 4 or 8 o'clock to the whales heading 12 o'clock • Never attempt an approach head-on or from directly behind. • Stay well clear of feeding baleen whales. • Try to position your vessel downwind of the animals to avoid engine fumes drifting over them. • Communication between vessels and Zodiacs in multivessel approaches should be established, to coordinate viewing and to ensure that you do not disturb or harass the animals. • Do not 'box-in' cetaceans or cut off their travel or exit routes. This is particularly important when more than one vessel is present. • Vessels should position themselves adjacent to each other to ensure the cetaceans have large open avenues to depart through if desired. • Beware of local geography – never trap animals between the vessel and shore. Assess the presence of obstacles such as other vessels, structures, natural features, rocks and shoreline. • <i>Remember: Avoid sudden or repeated changes in direction, speed or changing gears when close to marine mammals.</i>
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silent, stationary vessel.

(Note: Allowing a vessel to drift within accepted recommended distances could constitute an approach.)

1b. Recommended Minimum

Approach Distances:

- No intentional approach within 30 meters or 100 feet for Zodiacs, 100 meters or 300 feet for ships (150m/500 ft. if ship over 20,000 tons. 200m/600 ft. if 2 ships present).

1c. Awareness of the Animal/s'

Behavioural Patterns:

- Be aware of changes in behaviour of the animal/s.
- If the cetacean is agitated or no longer interested in staying near the vessel, the following behavioural changes may be observed:
 - The animal starts to leave the area.
 - Regular changes in direction or speed of swimming.
 - Hasty dives.
 - Changes in respiration patterns.
 - Increased time spent diving compared to time spent at the surface.
 - Changes in acoustic behaviour.
 - Certain surface behaviours such as tail slapping or trumpet blows.
 - Changes in travelling direction.
 - Repetitive diving.
 - General agitation.
- Do not stay with the animal/s too long. Suggested 15 min – 1 hr. If disturbance or change in behaviour occurs, retreat slowly and quietly.
- Never herd (circle), separate, scatter, or pursue a group of marine mammals, particularly mothers and young.
- If a cetacean approaches a vessel to bow-ride, vessels should not change course or speed suddenly. Do not enter a group of dolphins to encourage them to bow-ride.
- If a cetacean surfaces in the vicinity of your vessel, take all necessary precautions to avoid collisions.
- Do not feed any wild animals.

1f. In Close Approach Zone:

(Note: Ideally this should be no more than one vessel at a time)

Approximately 30 meters/100 feet for Zodiacs/

100 meters/300 feet for ships.

- When stopping to watch cetaceans, put your engines in neutral and allow the motor to idle without turning off; or allow the motor to idle for a minute or two before turning off. This prevents abrupt changes in noise that can startle the animals.
- Avoid excess engine use, gear changes, manoeuvring or backing up to the animals.
- Avoid the use of bow or stern lateral thrusters to maintain position. Thrusters can produce intensive cavitations (air bubble implosion) underwater.
- Be aware that whales may surface in unexpected locations.
- Breaching, tail-lobbing or flipper slapping whales may be socialising and may not be aware of boats. Keep your distance.
- Feeding humpback whales often emit sub-surface bubbles before rising to feed at the surface. Avoid these light green bubble patches.
- Emitting periodic noise may help whales know your location and avoid whale and boat collisions. For example, if your Zodiac engine is not running, occasionally tap on the engine casing with a hard object.
- If cetaceans approach within 30 meters or 100 feet of your vessel, put engines in neutral and do not re-engage propulsion until they are observed clear of harm's way from your vessel. On rare occasions, whales

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- Avoid touching or sudden movements that might startle the cetacean.
- If a cetacean comes close to shore or your boat, remain quiet.
- Playback of underwater sound of any kind should not occur.

have been seen to use ships as ‘backscratchers’, remain drifting.

- Stay quiet and restrict passenger movement in Zodiacs during close encounters.
- Enjoy the experience.

1g. Departure Procedures:

- Move off at a slow ‘no-wake’ speed to the minimum distance of the close approach zone. Avoid engaging propellers within the minimum approach distance, if possible.
- Always move away from the animals to their rear, *i.e.*, not in front of them.
- Do not chase or pursue ‘departing’ animals.

Appendix VIII: Suggested Convention on the Regulation of Antarctic Tourist Activities

Note: this is not intended to be a complete Convention, rather encompass the relevant sections to the issue of Marine Mammal interactions (constitutes a compilation of CCAMLR, Convention for the Regulation of Antarctic Mineral Resource Activities 1989 and the Environmental Protocol).

Convinced of the need to strengthen the Antarctic Treaty system so as to ensure that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord;

Bearing in mind the special legal and political status of Antarctica and the special responsibility of the Antarctic Treaty Consultative Parties to ensure that all activities in Antarctica are consistent with the purposes and principles of the Antarctic Treaty;

Recalling the designation of Antarctica as a Special Conservation Area and other measures adopted under the Antarctic Treaty system to protect the Antarctic environment and dependent and associated ecosystems;

Acknowledging the significance of the environmental principles of the Protocol on Environmental Protection to the Antarctic Treaty;

Admitting the importance of ethical discourse in the subject matter of the Treaty System, particularly in regard to the place of animals in the system;

Recognising the growth of the tourist activity to one of the largest forms human interaction on the continent;

Convinced that the development of a comprehensive regime for the protection of the Antarctic environment and dependent and associated ecosystems, and the development of tourist activities on the continent is in the interest of mankind as a whole;

Desiring to supplement the Antarctic Treaty System to this end;

Have agreed as follows:

Article 1

- (a) “The Antarctic Treaty” means the Antarctic Treaty done at Washington on 1 December 1959;
- (b) “The Protocol” means the Protocol on Environmental Protection to the Antarctic Treaty done at Bonn on 17 October 1991;
- (c) “Antarctic Treaty area” means the area to which the provisions of the Antarctic Treaty apply in accordance with Article VI of that Treaty;
- (d) “Antarctic Treaty Consultative Meetings” means the meetings referred to in Article IX of the Antarctic Treaty;
- (e) “Antarctic Treaty Consultative Parties” means the Contracting Parties to the Antarctic Treaty entitled to appoint representatives to participate in the meetings referred to in Article IX of that Treaty;
- (f) “Antarctic Treaty system” means the Antarctic Treaty, the measures in effect under that Treaty, its associated separate international instruments in force and the measures in effect under those instruments;
- (g) “Commission” means the Commission for the Regulation of Antarctic Tourist Activities established in accordance with Article 9.
- (h) “Tourist activities” means any activity outside a program ran by Antarctic Treaty Consultative Parties that engages in any form of recreational activity in the Treaty Area.
- (i) “Operator” means any commercial operator of a tourist activity.
- (j) “Platform” means any vessel or aircraft used for tourist activities.

Article II

The objective of this convention is the regulation of Antarctic Tourist Activities to ensure:

1. Consistency with the purposes and provisions of the Protocol and the Antarctic Treaty;
2. Comprehensive protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values

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and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment;

3. Rational utilization of the Antarctic area for Tourist Activities.

Article III:

Nothing in this Convention shall derogate from the rights and obligations of Contracting Parties under the International Convention for the Regulation of Whaling and the Convention for the Conservation of Antarctic Seals.

Article IV

Nothing in this Convention shall derogate from the rights and obligations of Contracting Parties under the Antarctic Treaty System.

Article V

1. The Contracting Parties hereby establish and agree to maintain the Commission for the Conservation of Antarctic Tourist Activities (hereinafter referred to as 'the Commission').
2. Membership in the Commission shall be as follows:
 - (a) each Contracting Party which participated in the meeting at which this Convention was adopted shall be a Member of the Commission;
 - (b) each State Party which has acceded to this Convention pursuant to Article XIII shall be entitled to be a Member of the Commission during such time as that acceding Party is engaged in research or harvesting activities in relation to the marine living resources to which this Convention applies;
 - (c) each regional economic integration organisation which has acceded to this Convention pursuant to Article XIII shall be entitled to be a Member of the Commission during such time as its States members are so entitled;
 - (d) a Contracting Party seeking to participate in the work of the Commission pursuant to sub-paragraphs (b) and (c) above shall notify the Depositary of the basis upon which it seeks to become a Member of the Commission and of its willingness to accept conservation measures in force. The Depositary shall communicate to each Member of the Commission such notification and accompanying information. Within two months of receipt of such communication from the Depositary, any Member of the Commission may request that a special meeting of the Commission be held to consider the matter. Upon receipt of such request, the Depositary shall call such a meeting. If there is no request for a meeting, the Contracting Party submitting the notification shall be deemed to have satisfied the requirements for Commission Membership.

Article VI

1. The function of the Commission shall be to give effect to the objective and principles set out in Article II of this Convention. To this end, it shall:
 - (a) facilitate research into and comprehensive studies of Antarctic tourist activities and of the Antarctic ecosystem;
 - (b) compile data on the status of and changes to the Antarctic environment and its dependent and associated ecosystems
 - (c) analyse, disseminate and publish the information referred to in sub-paragraphs (b) and (c) above and the reports of the Scientific Committee;
 - (d) identify conservation needs and analyse the effectiveness of conservation measures;
 - (e) formulate, adopt and revise conservation measures on the basis of the best scientific evidence available, including measures targeting the port states of relevant parties, subject to the provisions of paragraph 5 of this Article;
 - (g) implement the system of observation and inspection established under Article XI of this Convention;
 - (h) arrange and chair systematic ethical debate between Consulting Parties on the issues that arise in the course of the Commission;

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- (i) issue and revoke permits under Article XII of this Convention as necessary to fulfil the objective of this Convention;
 - (j) carry out such other activities as are necessary to fulfil the objectives of this Convention.
2. The conservation measures referred to in paragraph 1(f) above include the following:
- (a) the designation of any tourist activity;
 - (b) the designation of regions and sub-regions particularly affected by any tourist activity;
 - (c) the designation of the maximum usage.
 - (e) the designation of open and closed seasons for tourist activities;
 - (f) the designation of the opening and closing of areas, regions or sub-regions for purposes of scientific study or conservation, including special areas for protection and scientific study;
 - (h) prohibition of the platform employed;
 - (i) the taking of such other conservation measures as the Commission considers necessary for the fulfilment of the objective of this Convention, including measures concerning the effects of tourist activities on components of the ecosystem other than those directly effected by the activity.
 - (j) revocation of permit or refusal to apply permit as the Commission considers necessary to the fulfilment of the objective of this Convention.
3. The Commission shall publish and maintain a record of all conservation measures in force.
4. In exercising its functions under paragraph 1 above, the Commission shall take full account of the recommendations and advice of the Scientific Committee.
5. The Commission shall take full account of any relevant measures or regulations established or recommended by the Consultative Meetings pursuant to Article IX of the Antarctic Treaty or by existing fisheries commissions responsible for species which may enter the area to which this Convention applies, in order that there shall be no inconsistency between the rights and obligations of a Contracting Party under such regulations or measures and conservation measures which may be adopted by the Commission.
6. Conservation measures adopted by the Commission in accordance with this Convention shall be implemented by Members of the Commission in the following manner:
- (a) the Commission shall notify conservation measures to all Members of the Commission;
 - (b) conservation measures shall become binding upon all Members of the Commission 180 days after such notification, except as provided in subparagraphs (c) and (d) below;
 - (c) if a Member of the Commission, within ninety days following the notification specified in sub-paragraph (a), notifies the Commission that it is unable to accept the conservation measure, in whole or in part, the measure shall not, to the extent stated, be binding upon that Member of the Commission;
 - (d) in the event that any Member of the Commission invokes the procedure set forth in sub-paragraph (c) above, the Commission shall meet at the request of any Member of the Commission to review the conservation measure. At the time of such meeting and within thirty days following the meeting, any Member of the Commission shall have the right to declare that it is no longer able to accept the conservation measure, in which case the Member shall no longer be bound by such a measure.

Article VII

1. The Commission shall draw the attention of any State which is not a Party to this Convention to any activity undertaken by its nationals or vessels which, in the opinion of the Commission, affects the implementation of the objective of this Convention.
2. The Commission shall draw the attention of all Contracting Parties to any activity which, in the opinion of the Commission, affects the implementation by a Contracting Party of the objective of this Convention or the compliance by that Contracting Party with its obligations under this Convention.

Article VIII

The Commission shall seek to co-operate with Contracting Parties which may exercise

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jurisdiction in marine areas adjacent to the area to which this Convention applies in respect of the conservation of any stock or stocks of associated species which occur both within those areas and the area to which this Convention applies, with a view to harmonising the conservation measures adopted in respect of such stocks.

Article IX

1. The Contracting Parties hereby establish the Scientific Committee for the Conservation of Antarctic Tourist Activities (hereinafter referred to as 'the Scientific Committee') which shall be a consultative body to the Commission. The Scientific Committee shall normally meet at the headquarters of the Commission unless the Scientific Committee decides otherwise.
2. Each Member of the Commission shall be a Member of the Scientific Committee and shall appoint a representative with suitable scientific qualifications who may be accompanied by other experts and advisers.
3. The Scientific Committee may seek the advice of other scientists and experts as may be required on an *ad hoc* basis.

Article X

1. The Scientific Committee shall provide a forum for consultation and co-operation concerning the collection, study and exchange of information with respect to the Antarctic tourist activities to which this Convention applies. It shall encourage and promote cooperation in the field of scientific research in order to extend knowledge of the marine living resources of the Antarctic marine ecosystem.
2. The Scientific Committee shall conduct such activities as the Commission may direct in pursuance of the objective of this Convention and shall:
 - (a) establish criteria and methods to be used for determinations concerning the conservation measures referred to in Article V of this Convention;
 - (b) regularly assess the cumulative effects of Antarctic tourist activities on the environment;
 - (c) analyse data concerning the direct and indirect effects of Antarctic tourist activities on the environment;
 - (d) assess the effects of proposed changes in the use of platforms, tourist activities and proposed conservation measures;
 - (e) set quotas for the type, amount, and quantity of tourist activities in a given area in a given year.
 - (f) transmit assessments, analyses, reports and recommendations to the Commission as requested or on its own initiative regarding measures and research to implement the objective of this Convention;
 - (g) formulate proposals for the conduct of international and national programs of research into Antarctic tourist activities.
3. In carrying out its functions, the Scientific Committee shall have regard to the work of other relevant technical and scientific organisations and to the scientific activities conducted within the framework of the Antarctic Treaty.

Article XI

1. In order to promote the objective and ensure observance of the provisions of this Convention, the Contracting Parties agree that a system of observation and inspection shall be established.
2. The system of observation and inspection shall be elaborated by the Commission on the basis of the following principles:
 - (a) Contracting Parties shall co-operate with each other to ensure the effective implementation of the system of observation and inspection, taking account of the existing international practice. This system shall include, inter alia, procedures for boarding and inspection by observers and inspectors designated by the Members of the Commission and procedures for flag state prosecution and sanctions on the basis of evidence resulting from such boarding and inspections. A report of such prosecutions and sanctions imposed shall be included in the information referred to in Article VI of this Convention;

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- (b) in order to verify compliance with measures adopted under this Convention, observation and inspection shall be carried out on board vessels engaged in scientific research or Antarctic tourist activities in the area to which this Convention applies, through observers and inspectors designated by the Members of the Commission and operating under terms and conditions to be established by the Commission;
 - (c) designated observers and inspectors shall remain subject to the jurisdiction of the Contracting Party of which they are nationals. They shall report to the Member of the Commission by which they have been designated which in turn shall report to the Commission.
3. Pending the establishment of the system of observation and inspection, the Members of the Commission shall seek to establish interim arrangements to designate observers and inspectors and such designated observers and inspectors shall be entitled to carry out inspections in accordance with the principles set out in paragraph 2 above.

Article XII

1. No Contracting Party should allow tourist activity in the Antarctic Treaty Area unless the operator is issued a permit by the Commission.
2. Contracting Parties should apply for a permit on behalf of their national operators, and do so within 90 working days of the Commission's annual meeting.
3. Applications should include:
 - a. The type of aircraft and vessel to be used by the operator;
 - b. The names of the pilots of aircraft, the masters of vessels, and guides engaged in the commercial operation.
 - c. The areas the operation intends to access in the Antarctic Treaty Area, including the backup plans.
 - d. The proposed base of operation.
 - e. The duration of trips proposed.
 - f. The frequency of trips proposed.
 - g. Contact details for the operator, including name, phone number and postal address.
4. No Permits shall be issued by the Commission, unless the Scientific Committee is satisfied:
 - a. That the proposed commercial operation will be consistent with the purposes of this Convention.
 - b. The proposed commercial operation will be consistent with Annex 1 of this convention.
5. The Committee shall revoke a permit if:
 - a. The operator operates outside the purposes of this Convention.
 - b. Continued tourist activities will not be consistent with the purposes of this Convention.
6. All Permits shall be issued at the annual meeting of the Commission, and at no other time.
7. The Commission will report on all issued, revoked, not-issued and pending applications at the annual meeting of the Commission.
8. Any Contracting Party may apply to the Chairman of the Commission to have a permit decision reviewed. A review should be conducted by an independent panel of not more than 4 Commission members from different Contracting Parties.

Article XIII

1. Each Party shall take appropriate measures within its competence to ensure compliance with this Convention and any measures in effect pursuant to it.
2. If a Party is prevented by the exercise of jurisdiction by another Party from ensuring compliance in accordance with paragraph 1 above, it shall not, to the extent that it is so prevented, bear responsibility for that failure to ensure compliance.
3. If any jurisdictional dispute related to compliance with this Convention or any measure in effect pursuant to it arises between two or more Parties, the Parties

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concerned shall immediately consult together with a view to reaching a mutually acceptable solution.

4. Each Party shall notify the Executive Secretary, for circulation to all other Parties, of the measures taken pursuant to paragraph 1 above.

5. Each Party shall exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any Antarctic tourist activity contrary to the objectives and principles of this Convention.

6 Each Party may, whenever it deems it necessary, draw the attention of the Commission to any activity which in its opinion affects the implementation of the objectives and principles of this Convention.

7. The Commission shall draw the attention of all Parties to any activity which, in the opinion of the Commission, affects the implementation of the objectives and principles of this Convention or the compliance by any Party with its obligations under this Convention and any measures in effect pursuant to it.

8. The Commission shall draw the attention of any State which is not a Party to this Convention to any activity undertaken by that State, its agencies or instrumentalities, natural or juridical persons, ships, aircraft or other means of transportation which, in the opinion of the Commission, affects the implementation of the objectives and principles of this Convention. The Commission shall inform all Parties accordingly.

Annex I: Antarctic Flora and Fauna

Article 1

“Marine mammal” means any cetacean or pinniped in the Antarctic Treaty Area.

Article 2

The purpose of this annex is to make provision for the protection, conservation and management of Antarctic flora and fauna in particular to:

1. Regulate human contact or behaviour with marine mammals either by operators or other persons.
2. Prescribe behaviour by commercial operators and other persons wishing to come into contact with marine mammals.
3. Minimize wildlife disturbance.
4. Allow for a high quality wildlife experience through responsible observation.
5. Ensure Antarctic tourist activities are consistent with Annex II of the Protocol.

Article 3

The Scientific Committee shall:

1. conduct activities in coordination with the International Whaling Commission, as to the effects of interaction with Marine Mammals in the Antarctic Treaty Area. It shall encourage Cooperation and Integration between the two organisations;
2. encourage and stimulate debate on the place of flora and fauna within legal systems;
2. compile a set of Guidelines to Marine Wildlife Watching in the Antarctic Treaty Area based on industry standards and the best scientific information. This should include:
 - a. Maximum proximity of interaction.
 - b. Duration of encounter.
 - c. Advice on minimizing sound.
 - d. Maximum number of vessels.
 - e. Crew behaviour.

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- f. Appropriate platform behaviour and type.
- g. Most appropriate angle of approach.
- h. Examples of effective educational material.
- j. Any other relevant information consistent with the purposes of the Convention.

Article 3: Behaviour round Marine Mammals

1. Nothing in this Article shall derogate from the obligations under the Compliance with the International Regulations for Preventing Collisions at sea.
2. All tourist activity in the treaty area engaged in interactions with marine mammals should:
 - a. operate platform to minimize risk of adverse effects on cetaceans.
 - b. allow cetacean to control the nature and duration of the activity.
 - c. abandon all activity if marine mammal appears disturbed.
 - d. Do not disturb or harass the marine mammal.
 - e. Provide adequate educational material.
 - f. Abide by the Guidelines to Marine Wildlife Watching in the Antarctic Treaty Area.