

**PCAS 18 (2015/2016)****Critical Literature Review  
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***Title: Approaches to Wilderness and Aesthetic Values in a  
Domestic and International Context***

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Abstract (ca. 200 words):

Within the Protocol on Environmental Protection to the Antarctic Treaty 1991 (“the Madrid Protocol”) there are a number of key terms which are not adequately defined. This deliberate “constructive ambiguity” is useful in the process of reaching agreement between states with diverse cultural and political values but less helpful when it comes to implementing its terms. Within the context of the Madrid Protocol, two such undefined terms are “wilderness” and “aesthetic values” which must be taken into account and protected from adverse impacts. Across the different treaty party states there are differing levels of engagement with the matter of both “wilderness” and “aesthetic values” both domestically and in an Antarctic context. Looking at New Zealand, the United States of America and China’s approaches to “wilderness” shows three different levels of interaction with the concept domestically and three different interpretations of the term within an Antarctic context. The same can be seen in other state’s approaches, though it is beyond the scope of this paper to address this. In terms of “aesthetic values”, different methodologies for quantifying the visual worth of a landscape are employed by different states but with an emerging theme of public consultation. Both terms have not yet been actively engaged with on a wide scale within the Antarctic Treaty System, but certain themes can be ascertained across the approaches of the various states.

## Introduction

In international law, it is commonplace for the language of treaties and international instruments to be left intentionally vague. In order for the largest number of states to be prepared to sign up to multi state agreements, it is often the case that the terms within those treaties are left open to interpretation. Known as “constrictive ambiguity”, this allows states of often disparate cultural, political and legal backgrounds to reach agreement on broader issues while making what they will of some of the more specific terms. The 1991 Protocol on Environmental Protection to the Antarctic Treaty 1959 is no exception to this. The broad tenants of this document are accepted by the signatories, yet some of the more specific terms, for example “wilderness and aesthetic values”, are left deliberately undefined in order to allow scope for different states to operate their Antarctic programmes in accordance with that state’s values. However, difficulties can arise when attempting to achieve consistency as to how areas within the Antarctic are managed. Without a definition of key terms, such as “wilderness”, all 44 signatories cannot apply the same standards when considering the impact of their planned activities in the region. This paper will look at how “wilderness” and “aesthetic values” have been applied by a selection of Antarctic Treaty parties, both domestically and within an Antarctic context, as well as methodologies used for assessing visual aspects of a given landscape. It will attempt to demonstrate the challenges faced in reaching an agreed definition or criteria for categorising the landscape within the context of protecting those values.

## The Madrid Protocol

The Protocol on Environmental Protection to the Antarctic Treaty (“the Madrid Protocol”) was concluded in 1991 and came into force in 1998.<sup>1</sup> So far, the Protocol has been ratified and adopted by 33 member states, with 11 states still to ratify. This document creates an obligations on the parties to consider both “wilderness” and “aesthetic values” when evaluating the impacts of proposed activities on the continent. Article 3 of the Madrid Protocol states:

*The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area.*

It goes on to state that activities in Antarctica should be conducted so as to avoid:

*[...] degradation of, or substantial risk to, areas of biological, scientific, historic, aesthetic or wilderness significance.<sup>2</sup>*

Overall the phrase “wilderness and aesthetic values” is used or referred to five times within the text of the Protocol.

The mechanism for ensuring the above is through the use of impact assessments and the designation of Antarctic Specially Protected Areas (“ASPA”) or Antarctic Specially Managed Areas (“ASMA”).

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<sup>1</sup> <http://www.ats.aq/e/ep.htm>

<sup>2</sup> The Protocol on Environmental Protection to the Antarctic Treaty 1991, Article 3(2)(b)(vi)

However, there is no definition given within the body of the Madrid Protocol which assists in defining what the term “wilderness and aesthetic Values” means in a practical sense.

This theme of “wilderness” and “aesthetic” protection of the Antarctic Environment was drawn from its inclusion in earlier discourse and within the text of the Convention on the Regulation of Antarctic Mineral Resource Activities (“CRAMRA”) but, again, the terms were not defined.<sup>3</sup>

### **Challenges to finding a definition**

While there have been some efforts to reach agreed definitions, both the terms “wilderness” and “aesthetic” are subjective concepts influenced widely by differing cultural norms. This can make agreeing on a measurable standard problematic and inevitably tied up in issues of culture and politics, hence the intentional “constructive ambiguity” of the wording. There is considerable literature which has addressed this issue and sought to find some unifying factor to the approaches of different treaty parties to these terms as well as seeking to find some form of objective measure for the significance of the wilderness and/or aesthetic value of particular landscapes.<sup>4</sup> A theme within the literature is that “wilderness values” and “aesthetic values” are distinct and can be approached and measured separately.<sup>5</sup> While an area such as an ice sheet may be viewed as a “wilderness” it may not be viewed as having a particular “aesthetic” significance.<sup>6</sup> As such, two measurable definitions or sets of criteria are needed for two conceptual values.

Within an international agreement which involves a vast and diverse range of nation states from a range of cultural heritages, defining any kind of subjective term is difficult. For instance, the use of the word “wilderness” has been criticised by some states and academics as being a colonial and Eurocentric conception which is not equally understood or valued amongst all parties to the Antarctic Treaty System.<sup>7</sup> The issue is further complicated by the fact that there is no direct equivalent of the English word “wilderness” in some languages, including within Spanish and French.<sup>8</sup> As far as “aesthetic value” is concerned, different “aesthetics” are valued differently by different cultures and efforts need to be made to incorporate a variety of perspectives into decision making.

These two central issues have posed significant challenges to achieving a definition for these terms, which in turn makes consistency across the treaty parties when conducting their Impact Assessments difficult to achieve. By examining the approaches different party states to the Madrid Protocol to each of the terms “wilderness” and “aesthetic value”, both in an Antarctic context and within their own countries, it is possible to demonstrate these difficulties.

Within the literature there appears to be a stronger focus on searching for a definition for the term “wilderness” at state level than “aesthetic value”, though some attempts have been made to

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<sup>3</sup> Convention on the Regulation of Antarctic Mineral Resource, Article 3(2), Article 4(2)(e)

<sup>4</sup> See for example R. Summerson, R & I.D. Bishop, I D ‘Wilderness and aesthetic values in Antarctica’ in *Polar Research* 2012, 31, 10858, <http://dx.doi.org/10.3402/polar.v31i0.10858>

<sup>5</sup> Codling, R ‘Wilderness and aesthetic values in the Antarctic’ *Polar Record* 37 (203): 337-352 (2001) at p338

<sup>6</sup> Summerson, R & Bishop, I D ‘Aesthetic value in Antarctica: beautiful or sublime?’ in *The Polar Journal* Vol. 1, No. 2, December 2011, 225–250 at 229 at p228

<sup>7</sup> Deary, H & Tin, T ‘Antarctic Treaty Consultative Parties’ engagement in wilderness protection at home and in Antarctica’ in *The Polar Journal* (2015) Vol. 5, No. 2 pp278–310, at p280

<sup>8</sup> Eidsvik, H K ‘The Status of Wilderness: An International Overview’ in *Natural Resources Journal* (1989) Vol.29 Winter 57, at p60

formulate objective criteria for assessing this term. It is therefore appropriate to deal with each in turn.

## **Approaches to “Wilderness”**

### ***New Zealand***

New Zealand is a claimant state to the Antarctic continent and holds consultative status within the Antarctic Treaty System. It adopted the Madrid Protocol into its domestic law in via the Antarctica (Environmental Protection) Act 1994. The Act formally adopts the text of the treaty and creates mechanisms for the implementation of the Protocol as regards New Zealand’s activities in the Antarctic. However, the Act itself does not further define what is meant by “wilderness”.

Within New Zealand’s domestic context, the terms “wilderness” and “wilderness areas” are referred to a number of times within a range of legislative instruments but are not concretely defined. There is no specific “wilderness” legislation within New Zealand. However, “wilderness” is discussed in a range of policy documents, for example, within the Department of Conservation’s visitor guidelines as:

*Wilderness areas are wild lands which appear to have been affected only by the forces of nature, with any imprint of human interference substantially unnoticeable ... Tracts of land chosen to be protected as wilderness areas should meet the following criteria: (i) they will be large enough to take at least 2 days’ foot travel to traverse; (ii) they should have clearly defined topographic boundaries and be adequately buffered so as to be unaffected, except in minor ways, by human influences; (iii) they will not have facilities such as huts, tracks, bridges, signs, nor will mechanised access for recreation be allowed.<sup>9</sup>*

It has been suggested that New Zealand’s model of ‘wilderness’ focusses more on the absence of the appearance of human activity in the region rather than the actual absence of activity.<sup>10</sup>

In an Antarctic context, New Zealand is one of the more active parties where reaching a definition of these key terms is concerned. New Zealand is responsible for submitting 44 papers containing reference to or concerning “wilderness” in the Antarctic.<sup>11</sup> New Zealand, both independently and with other states, have tabled a number of proposals to the Antarctic Treaty Consultative Meetings which include, among others, conceptions of “wilderness” as follows:

*Large area of unmodified land [not completely ice-covered] with or without adjacent sea retaining its natural character and influence, at least [200 km] from permanent or semi-permanent habitation and major logistic transport routes, which is protected and managed so as to preserve its natural condition as an Antarctic wilderness.<sup>12</sup>*

And in a later submission:

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<sup>9</sup> New Zealand - Department of Conservation *Visitor Strategy* August 1996, at p20 - 21.

<sup>10</sup> Deary, H & Tin, T at p289

<sup>11</sup> Ibid, at p282

<sup>12</sup> New Zealand (1999) *Towards additional protection of Antarctic Wilderness Areas*. (CEP II IP 80)

*Wilderness in the Antarctic could be similarly viewed as absence of footprint.*<sup>13</sup>

And most recently:

*Wilderness areas, a distinguishing feature is being free of modern infrastructure. The near pristine and remote nature of most of terrestrial Antarctica is consistent with and relevant to these aspects.*<sup>14</sup>

A theme within New Zealand's approach is on the absence of visible infrastructure or signs of human activity. This does not preclude human activity, as long as there is no lasting sign of it.

### **United States of America**

The USA is also an original treaty state and consultative member of the Antarctic Treaty System and adopted the Madrid Protocol into its domestic legislation via the Antarctic Science, Tourism, and Conservation Act of 1996. Like the New Zealand statute, this act incorporates the provisions of the Madrid Protocol into the laws of the USA and creates implementation mechanisms. Again, the term "wilderness" is nowhere defined. In fact, within the body of the Act, the term "wilderness" is not used at all.

Domestically, the USA has one of the more established "wilderness" regimes, boasting the world's earliest wilderness protection legislation, The Wilderness Act 1964. The term is defined as:

*[...] an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence... [and] affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.*<sup>15</sup>

It has been suggested that, as a frontier nation without an extended history of intensive occupation, the USA's conception of "wilderness" is of areas which are 'primitive' and have never been tampered with or occupied by humans.<sup>16</sup> Unlike New Zealand's "what appears" focus on the appearance of the landscape, the USA takes a more philosophical "what is" approach to defining "wilderness" as actually untouched and unoccupied in practice.<sup>17</sup>

However, in an Antarctic context, the USA has been one of two parties to formally resist reaching a definition of "wilderness", the other being Argentina.<sup>18</sup> This has caused some frustration when it comes to reaching a consensus on how to apply the provisions of the Madrid Protocol.<sup>19</sup> The USA

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<sup>13</sup> New Zealand (2011) *Understanding concepts of footprint and wilderness related to protection of the Antarctic environment*. (CEP XIV WP 35)

<sup>14</sup> New Zealand and Netherlands (2012) *Concepts for wilderness protection in Antarctica using tools in the Protocol*. (CEP XV WP 50)

<sup>15</sup> The United States of America -The Wilderness Act 1964, section 2(c)

<sup>16</sup> Dreary & Tin at p296

<sup>17</sup> Ibid at 330

<sup>18</sup> CEP, Report CEP XIV, para. 177; Report CEP XVII, para. 177.

<sup>19</sup> Dreary & Tin at p331

does not view Article 3 as binding and therefore does not view the requirement to consider “wilderness” as mandatory.<sup>20</sup>

Despite this, the USA have applied definitions of “wilderness” within a range of management plans and submissions within the Antarctic Treaty System, for example (among others):

*Wilderness value [characterized as]... an area without permanent improvements or visible evidence of human activity. The remote areas of Antarctica that exist in locations away from established stations, field camps, and infrequently visited terrain allow visitors to experience the remoteness of the continent and the unique Antarctic environment<sup>21</sup>*

Again, in conjunction with New Zealand:

*Nearly pristine environment largely undisturbed and uncontaminated by humans.<sup>22</sup>*

Further and more recently, in conjunction with Argentina, Spain, Norway and the United Kingdom:

*Areas in the Area which thus far have not been significantly modified by human activity.<sup>23</sup>*

Again, we can see the theme of non-interference by human activity coming through in these definitions, yet they each allow for some form of human activity or alteration.

### **China**

China gained consultative status within the Antarctic Treaty System in 1989 and was involved in the formulation of the Madrid Protocol from the outset, ratifying and adopting the Protocol in 1994. Unlike the above two states, China makes no reference to “wilderness” or “wilderness values” within any of its domestic legislation.<sup>24</sup>

However, within the Antarctic sphere, China has engaged with the concept of “wilderness”, submitting a number of papers and management plans addressing or referring to “wilderness”.<sup>25</sup> It has chosen to include consideration of its activities on “wilderness values” within two Comprehensive Environmental Evaluations, though this is not required, indicating a commitment to engaging with the idea of “wilderness”.

Coming from a cultural heritage so vastly different from the British Imperial legacy of the above two states, Chinese conceptions of “wilderness” are understandably different to those formulated within a more Eurocentric environment. There is typically a greater tolerance for levels of human activity within the landscape in question and scope for evidence of permanent human activity.<sup>26</sup> For instance, in a Management Plan submitted last year in conjunction with Australia, India, Romania and the Russian Federation “wilderness” was framed as an area with “*less evidence of human presence*

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<sup>20</sup> Bastmeijer, K ‘Managing Human Activities In Antarctica: Should Wilderness Protection Count?’ in *New Zealand Yearbook of International Law* [Vol 2, 2005] at p348

<sup>21</sup> USA (2004) *Development and Implementation of Surface Traverse Capabilities*. (Final CEE)

<sup>22</sup> New Zealand and USA (2011) *ASMA 2* (Management Plan)

<sup>23</sup> Australia, China, India, Romania and Russian Federation (2014) *ASMA 6* (Management Plan)

<sup>24</sup> Dreary & Tin, at p300

<sup>25</sup> Ibid at p329

<sup>26</sup> Ibid at p330

*than elsewhere*".<sup>27</sup> This model accepts that there has been human impact in a given area and that there may be further activity in the future.<sup>28</sup>

China appears to follow the "what appears" model favoured by New Zealand rather than the "what is" or philosophical model of the USA.<sup>29</sup> This theme can be seen in their approach to the mitigation of adverse effects on the "wilderness" value of the environment (which can also extend to their approach to impacts on the "aesthetic value"). For example, within a recent CEE the restoration of "wilderness values" was addressed:

*The station layout is intended to have a minimum impact on the landscape. Tracked vehicles will only be used on the designated routes to minimize the disturbances to the land surface. When the operation of the station will be terminated, the station will be completely cleared away from Antarctica as much as possible and no obvious trace will be left there.*<sup>30</sup>

The Chinese conception of "wilderness" is therefore not permanently altered by the presence of evidence of human activity.

### **Approaches to "Aesthetic Value"**

This term is more difficult to assess state to state and there has been less of a push towards reaching a definition as the term is, to some extent, more challenging to define than "wilderness"<sup>31</sup>. Instead, the focus has been on assessing which criteria need to be present in a landscape in order for it to have differing levels of "aesthetic value".

Some States place significance on "aesthetic value" in discourse relating to both an Antarctic and domestic decision making. One example is New Zealand's Resource Management Act 1991 which requires decision makers to take into account the effect of a proposed activity on the "amenity value" of the landscape, which defined to include "its pleasantness, aesthetic coherence, and cultural and recreational attributes".<sup>32</sup> Even within a domestic context, considerable case law has been expended in trying to quantify the aesthetic value of the landscape in question. Within the international sphere, reaching a consensus is even more challenging. As with "wilderness", not all states make reference to "aesthetic values" when conducting impact assessments for proposed development or activities within a domestic context and therefore have no mechanisms in place for conducting such an assessment in the Antarctic Context.

Even within those states which do attempt to measure the "aesthetic" impact of development, there is no one agreed method of assessing the relative "aesthetic value" of a given landscape. Within some states, such as the USA and United Kingdom, techniques such as the use expert panels to conduct Landscape Character Assessments are traditionally favoured. The United Kingdom also favours this approach in respect of its Antarctic activities.<sup>33</sup>

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<sup>27</sup> Australia, China, India, Romania and Russian Federation (2014) ASMA 6 (Management Plan)

<sup>28</sup> Dreary & Tin, at p

<sup>29</sup> Ibid, at p

<sup>30</sup> China (2014) CEE - Proposed Construction and Operation of a New Chinese Research Station, Victoria Land, Antarctica

<sup>31</sup> Summerson & Bishop, 'Wilderness and aesthetic values in Antarctica' at p2

<sup>32</sup> Resource Management Act 1991, section 2

<sup>33</sup> Codling 'Wilderness and Aesthetic Values in the Antarctic' at p340

However, there has been interest by states in a shift towards “citizen-led” landscape classification whereby public opinion is canvassed in order to evaluate the aesthetic quality of a landscape or landscape features.<sup>34</sup> In this approach participants are presented with a view of the landscape and asked to report on their response. From the data provided, certain themes can be brought together to help classify landscapes or types of landscape as holding different levels of aesthetic significance.<sup>35</sup> These types of survey have been utilised by a number of states in gathering empirical data on something as subjective as “aesthetic value”.<sup>36</sup>

However, this technique is not without its challenges in an Antarctic context. For instance, traditional “on the ground” survey techniques are not necessarily practical in such a remote environment and would not be drawn from a representative sample of respondents.<sup>37</sup> This same issue of representation is also challenging with more remote survey techniques, where, again, reaching a sufficiently broad demographic of respondents is challenging.<sup>38</sup> For this reason some states are beginning to experiment with the use of internet surveys in order to reach a large number and broad spectrum of respondents.<sup>39</sup> For example, in Germany research has been conducted into the effectiveness of this technique in its domestic context. There have also been attempts to measure this technique’s effectiveness in an Antarctic context. From this research, there are certain criteria which can be formulated for assessing the “aesthetic value” of a landscape and factors which might detract from that value. For example, evidence of human activity and infrastructure was found to detract from the “aesthetic” quality of a region, as is the case with “wilderness”, discussed above.<sup>40</sup> Interestingly, the result of one study was to show that ice free environments, such as coastal regions and the Dry Valleys were deemed of considerably less “aesthetic value” by the respondents, though they may represent a “wilderness” by way of the definitions utilised by the various parties.<sup>41</sup>

Methodologies such as these are useful in an Antarctic context to overcome criticism of Eurocentrism within the Treaty System. By utilising technology to conduct empirical research on the prioritisation of certain aesthetic values which are understood across a range of cultures and heritages, rather than being limited to those valued by specific groups of people.<sup>42</sup>

## Conclusion

The use of subjective terms such as “wilderness” and “aesthetic values” within international law can present some significant challenges when it comes to consistent implementation of assessment criteria by all party states. In seeking to find a definition from these terms, it is important to note that they cannot be divorced from the cultural perspective of the state putting forward the definition. With “wilderness”, key differences lie in different state’s familiarity with the application of this concept domestically, as well as philosophical approaches to the phrase – some favouring an

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<sup>34</sup> Summerson, R & Bishop, I D ‘Aesthetic value in Antarctica: beautiful or sublime?’ in *The Polar Journal* Vol. 1, No. 2, December 2011, 225–250 at 229

<sup>35</sup> *Ibid* at p230

<sup>36</sup> Roth, M ‘Validating the use of Internet survey techniques in visual landscape assessment—An empirical study from Germany’ in *Landscape and Urban Planning* 78 (2006) 179–192, at p180

<sup>37</sup> Summerson & Bishop ‘Aesthetic value in Antarctica: beautiful or sublime?’ at p232

<sup>38</sup> Roth, at p 180

<sup>39</sup> *Ibid* at p181

<sup>40</sup> Summerson & Bishop ‘Aesthetic value in Antarctica: beautiful or sublime?’ at p235

<sup>41</sup> *Ibid*, at p230

<sup>42</sup> Roth, at p181

untouched landscape, while others tolerate varying degrees of human activity. Similarly, approaches to the domestic application of an “aesthetic value” criterion varies from state to state but some themes, such as the absence of lasting evidence of human activity, can be discerned from consultation with the global public which assist with achieving cohesion. There is still considerable work to be done in overcoming certain state’s resistance to formulating a single agreed definition. However, treaty states are actively engaging with the concept of “wilderness” and “aesthetic values” in the context of Antarctica and this, one would hope, will lead to more active protection of those values in the future.

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