

Special Offer—7 Days Fly and Drive Antarctica: The Role of Wilderness Protection in Deciding Whether (Semi) Permanent Tourist Facilities in Antarctica Should be Prohibited

Kees Bastmeijer

Abstract—Antarctica is often described as one of the world's last wildernesses. Since 1990, tourism to this wilderness is developing rapidly. In a period of 15 years, the number of tourists that make landings in Antarctica has increased from 2,500 (1990/91) to more than 23,000 (2004/05). The diversity of tourist activities is also increasing. The 1991 Protocol on Environmental Protection to the Antarctic Treaty explicitly provides Antarctica's "wilderness values" legal status, but do wilderness values indeed play a role in the current international debate on Antarctic tourism management? This contribution focuses on one of the main elements of this debate: the question whether the establishment of new (semi) permanent facilities for tourism in Antarctica should be prohibited. After analyzing this debate and the issue of wilderness protection in Antarctic management more broadly, the author concludes that this question shows a parallel with the Antarctic mining debate in the 1980s and that the issue touches upon a more fundamental policy question: should Antarctica be preserved as a 'wilderness' with as limited evidence of human presence as possible or should Antarctica be managed as an 'international park' in which various values and functions are balanced, for instance through a spatial planning system?

Introduction

Many people may consider the 'special offer' in the title of this paper unrealistic, however, tourism to wilderness areas is growing worldwide and Antarctica has also become a popular tourist destination. The number of tourists that make landings in Antarctica has increased from 2,500 in 1990-91 (Bastmeijer and Roura 2004) to more than 23,000 in 2004-05 (IAATO 2005). While for many decades Antarctic tourism has primarily been ship-based, since the 2003-04 season the so-called *Fly-Sail* or *Fly-Cruise* operations have started; tourists are taken to the Antarctic Peninsula by aircraft (thereby avoiding the 'Drake Passage' by ship), where they make excursions on yachts or cruising vessels (see for example, www.antarcticaxxi.com).

Kees Bastmeijer, Associate Professor of Environmental Law, Tilburg University, The Netherlands.

In: Watson, Alan; Sproull, Janet; Dean, Liese, comps. 2007. Science and stewardship to protect and sustain wilderness values: eighth World Wilderness Congress symposium: September 30–October 6, 2005; Anchorage, AK. Proceedings RMRS-P-49. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

In the near future, such air-based tourism may easily be combined with snowmobile or hovercraft excursions, having 'bed & breakfast' in (semi)permanent camping facilities and/or research stations. In fact, camping in Antarctica is already taking place, and during the last Antarctic season, 43 tourists were offered facilities at a research station of Uruguay (IAATO 2004).

The use of motorized vehicles by tour operators is also in development. During the 2004-05 season one company trial tested a hovercraft in Antarctica and plans to use it as an alternative landing craft during the 2005-06 season (IAATO 2004).

These fast developments in Antarctic tourism raise various management questions. Questions relating to the safety of tourists, questions relating to the interaction between science and tourism, and questions relating to direct, indirect or cumulative effects on ecosystems. Since 1990, a number of these issues have received attention within the Antarctic Treaty System (ATS) and particularly the last few years, tourism management has constituted one of the most important agenda items of the Antarctic Treaty Consultative Meetings (ATCM), the annual meeting of the 28 states that manage Antarctica collectively.

This paper does not address all these tourism management issues but focuses on the question whether the establishment of new (semi)permanent facilities for tourism in Antarctica should be prohibited. In finding an answer to this question, the issue of wilderness protection in Antarctica receives special attention. For the purpose of this contribution, permanent facilities are facilities that would be established in Antarctica with the intention to last or remain there for a relatively long period of time, such as hotels, visitor centers or airstrips. Semipermanent facilities are those facilities that are established in Antarctica with the intention to remain there for a month or a season, such as summer season camping sites.

Antarctic Wilderness

'Wilderness' has been defined from different perspectives. Aplet, Thomson and Wilbert (2000: p. 90) explain that the term wilderness "has been thought of both as a real place and as an experience." In respect of Antarctica, Codling (1998; 2001) has published valuable publications in order to provide more clarity on the term wilderness in the Antarctic context.

She formulates a wilderness definition based on physical characteristics: “[A]ny part of the Antarctic in which neither permanent habitation nor any other permanent evidence of present or past human presence is visible” (Codling 1998: p. 2). Although this definition is in agreement with wilderness literature concerning other parts of the world, one might debate the need of including the term ‘permanent.’ On the one hand, the use of this term in this definition is important to ensure that a wilderness does not immediately ‘lose’ its wilderness status because of temporary human activity in that area. On the other hand, its use should not give us the impression that the wilderness values of Antarctica can only be affected by activities that result in permanent evidence of human presence. In my view, temporary activities such as the use of helicopters may also affect the wilderness value of an area, although this ‘impact’ will be temporary.

Keys (1999: p. 6) also reflects on the possibility of such temporary impacts (‘disturbance’) in his description of Antarctic wilderness values:

Antarctic wilderness values include those of remoteness, few or no people, an absence of human made objects, traces, sounds and smells, and untraveled or infrequently traveled terrain. This implies remoteness from permanent or semipermanent habitation (not merely an absence of it), an absence of related human artifacts, (e.g. tracking) and disturbance and an absence of motorised transport.

Based on the wilderness literature and particularly this quotation from Keys, for the purpose of this contribution, ‘wilderness’ is defined as a relatively big natural area, free from human-made objects, artifacts and disturbance. The term ‘disturbance’ in this definition may, for instance, include the use of motorized transport and a high number of visitors (cumulative impacts), but does not refer to the influence of the global processes, such as the deposition of heavy metals and climate change. This definition implies the definition of “wilderness values” or ‘wilderness qualities’ as those values or qualities that qualify and characterize a natural area as a ‘wilderness’ or a ‘wilderness area.’

In view of this definition, the present author agrees with Codling and Keys that most of the Antarctic must be considered wilderness with the exception of, in particular, the areas where research stations are located (Codling 2001; Keys 1999).

Status of Wilderness Values Under the Antarctic Treaty System

During the first half of the 20th century, seven states (Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom) claimed parts of the continent, but the legitimacy of these claims was disputed. In 1959, the seven claimant states and five other states involved in Antarctic research (conducted during the International Geophysical Year of 1957/58) signed the Antarctic Treaty, which entered into force in 1961. A central element of the Treaty is the ‘agreement to disagree’ of Article IV regarding the legitimacy of the sovereignty claims: The positions of all states in respect of the legal status of Antarctica are reserved

and the Contracting Parties agree to manage Antarctica collectively. Since 1961, other states succeeded in showing a substantial scientific interest in Antarctica, and today 28 ‘Consultative Parties’ are involved in the Antarctic decision-making process, which is based on consensus.

Since the Treaty was promulgated, several other conventions and more than 200 recommendations have been adopted. This set of instruments for the international governance of the Antarctic is often referred to as the Antarctic Treaty System (ATS) (Elliott 1994; Stokke and Vidas 1996). With the adoption of the Protocol on Environmental Protection to the Antarctic Treaty in 1991 (hereinafter the Protocol), the protection of the Antarctic environment forms—parallel to safeguarding peace and ensuring the freedom of scientific research—the third pillar of the ATS. The Protocol that entered into force on 15 January 1998, establishes a comprehensive system of obligations and prohibitions, addressing most types of activities in the region south of 60 degrees South latitude (Bastmeijer 2003a; Blay 1992; Dingwall 1998).

Although the Antarctic Treaty itself does not refer to the need to protect Antarctica as a ‘wilderness,’ Codling (1998) notes that during the 1980s the need to protect the Antarctic wilderness received attention in various documents of the Scientific Committee on Antarctic Research (SCAR) and the World Conservation Union (IUCN). The concept of wilderness protection was also included in various provisions of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA), which was finalized in June 1988. “In relation to Antarctic mineral resource activities, should they occur, the Parties acknowledge the special responsibility of the Antarctic Treaty Consultative Parties for the protection of the environment and the need to: ... d. respect Antarctica’s scientific value and aesthetic and wilderness qualities...” (Article 2, paragraph 3; see also the preamble and Article 4, paragraph 2). However, it was that same concept of wilderness protection that was one of the arguments of those lobbying for a total ban on mining in Antarctica and for the rejection of CRAMRA. In the late 1980s, international NGOs advocated the establishment of an ‘Antarctic World Park’ (Heijnsbergen 1983; Rothwell 1990), which excluded the possibility of commercial mining: “World Park Antarctica calls for the protection forever of our last great wilderness continent from all environmentally destructive human activities, including all mining activities” (Goldsworthy 1987: p. 90).

In 1989, it became clear that CRAMRA would not enter into force. Australia and France—soon joined by other countries (for example, Belgium, India, and New Zealand) (Blay 1992)—decided not to sign and ratify CRAMRA. Wilderness protection constituted one of the arguments for Australia not to sign and ratify CRAMRA (Redgwell 1994). “Antarctica should be preserved in a near pristine state while still being available for scientific research as envisaged under the Antarctic Treaty” (Brown 1990: p. 97).

The World Park concept, CRAMRA and various recommendations adopted in respect of the protection of the Antarctic environment (for example, Recommendation XV-1) were important sources of inspiration for the negotiations of the Protocol in 1990 and 1991. This may explain why the concept of protecting wilderness values is explicitly included in the

Protocol. Article 3(1) of the Protocol provides an overview of all values that must be respected when planning and conducting human activities in the Antarctic. This provision explicitly includes ‘wilderness values’:

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 values 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.

Given the general formulation of Article 3 and the title of this provision, (Environmental Principles), it is to be assumed that the values identified in this provision, including wilderness values, must be taken into account when implementing the other provisions of the Protocol. For instance, wilderness values should be taken into account when making Environmental Impact Assessments (EIAs) for proposed Antarctic activities (Bastmeijer 2003b). The Protocol also contains various other provisions that are relevant for the issue of wilderness protection, although the term ‘wilderness’ is not explicitly used in these provisions. For instance, with the adoption of Article 2 of the Protocol, the Contracting Parties agreed to designate Antarctica as, “. . . a natural reserve, devoted to peace and science.”

The Role of Wilderness Protection in the International Antarctic Tourism Debate

Should (Semi)permanent Facilities be Prohibited?

The question whether the establishment of (semi)permanent facilities for tourism in Antarctica is desirable is certainly not ‘new’; already during the negotiations of the Protocol in 1990, this issue received attention: “Consideration was also given to the convenience of carrying out tourist activities by maritime means. This would avoid the proliferation of terrestrial support infrastructure in Antarctica” (Working Group II Report 1990).

Shortly after the Protocol was signed, Recommendation XVI-13 was adopted (Final Report of the XVIth ATCM, 1991: p.131–132), which states that “an informal meeting of the Parties be convened with a view to making proposals to the XVIIth Consultative Meeting on the question of a comprehensive regulation of tourist and non-governmental activities in Antarctica . . .” In the Recommendation a number of issues are listed that require attention, including the “. . . number of tourist carrying capacity, permanent infrastructure for tourists, concentration/dispersal of tourist activities and access to unexplored areas.” For many years, none of these issues was seriously discussed; however, since 2004 there appears to be a greater willingness among the consultative parties to start a debate on more fundamental tourism management issues, including the question whether (semi) permanent facilities for tourism should be prohibited.

Summary of the International Debate Since 2004

The issue of (semi)permanent facilities for tourism in Antarctica was put on the agenda of the Antarctic Treaty Meeting of Experts on Antarctic Tourism in Norway (March 2004) by New Zealand. At that meeting, New Zealand proposed to prohibit the establishment of such facilities. The proposal was subject to a comprehensive debate, and in the discussions the link with the obligation to protect wilderness values under the Protocol received special attention. The report of the meeting states that the view was expressed that “designation of Antarctica as a ‘natural reserve’ and the obligation to protect ‘wilderness values’ in the Protocol are additional arguments for supporting New Zealand’s proposal and allowed States to uphold a policy distinguishing between scientific and tourist activities in regard to the establishment of permanent facilities” (ATME Report 2004). However, consensus on this issue was not reached. New Zealand decided not to submit the paper at the XXVIIth ATCM (Cape Town, May/June 2004), probably because the discussions in Norway had shown that the scope of the proposal was to be defined more precisely.

At the XXVIIIth ATCM in Stockholm (2005), the Consultative Parties continued the discussion on the basis of two information papers (ASOC 2005; Germany 2005) and two working papers (New Zealand 2005; Australia 2005). All these papers advocated the prohibition of (semi)permanent facilities for tourism in Antarctica (see Final Report XXVIIIth ATCM). An analysis of these papers identifies the following arguments in favor of such a prohibition or other types of regulatory measures.

The establishment of (semi)permanent facilities for tourism:

- Are inconsistent with the designation of Antarctica as a ‘natural reserve, devoted to peace and science’ in Article 2 of the Protocol and the environmental principles of Article 3 of the Protocol, including the obligation to protect Antarctica’s wilderness values (Australia, Germany, New Zealand).
- Will “inadmissibly erode and restrict the research privilege,” laid down in the Antarctic Treaty and the Protocol (Germany (quotation), New Zealand, ASOC).
- May cause difficult and sensitive discussions between states and other stakeholders on legal issues (sovereignty, jurisdiction and private ownership) and these discussions may “severely test the ATS framework” (Australia, New Zealand [quotation], ASOC).

In view of these arguments and the fast developments in Antarctic tourism, some of the papers also stressed that measures should be taken before it is too late. Furthermore, the Australian paper also refers to the responsibility of the ATS in relation to the tourism industry. The paper proposes a policy approach that would acknowledge and build on the commitment of tourism operators to maintain a sustainable and socially responsible industry. In view of the various arguments, New Zealand suggested the adoption of a further instrument that would ensure Antarctica is in principle and

in practice off limits to such development and the Australian paper included a concrete proposal for a measure (an instrument that becomes legally binding after the formal approval by all Consultative Parties) on this issue: "Parties shall not authorize the development of any new permanent or semipermanent infrastructure for the conduct or support of tourism or other non-government activities in Antarctica."

Compared to the discussions in Norway (Expert Meeting) and South Africa (ATCM), the issue was discussed in Stockholm much more thoroughly and a large part of the Consultative Parties participated in this debate. During the discussions, various parties supported one or more of the arguments listed above (for example, France, the Netherlands, Norway). However, there were also parties that were not convinced of the need to adopt the proposed measure.

- Some questioned the inconsistency of (semi)permanent facilities with the provisions of the Protocol (for example, the United States, the United Kingdom, Argentina, Sweden).
- Others questioned the hierarchy between science and tourism (for example Spain), or stressed that, given the fact that governments share the coastal areas of Antarctica with the tourist industry, this industry should not be discriminated against elsewhere in Antarctica (Argentina).
- The International Association of Antarctic Tour Operators (IAATO) questioned the need to take action, because the development of serious proposals for such facilities was considered unlikely. IAATO also argued that there are already structural facilities in Antarctica to support tourism and suggested that tourism may help consultative parties in funding the cost of scientific research and logistic activities.
- Some parties "believed that these activities could be controlled through existing instruments such as Environmental Impact Assessment procedures" (Final Report XXVIII ATCM, paragraph 172).
- Various parties questioned the unclear scope of the proposed measure, particularly because terms such as '(semi)permanent,' 'facility,' or 'infrastructure' may be the subject of different interpretations.

These arguments also prevented the meeting from reaching consensus on a proposal to adopt a non-legally binding instrument (a resolution) on this issue.

Nonetheless, the discussions made it clear there is consensus among the consultative parties that it is an important policy issue that requires further consideration: "Delegates agreed that they shared concerns about the undesirable possible consequences of the development of such permanent and semipermanent infrastructure. . . It was acknowledged that tourism was not a prohibited activity in Antarctica, but that land-based tourism involving permanent infrastructure in the Antarctic needed to be addressed" (Final Report XXVIII ATCM, paragraphs 169 and 171). The draft Final Report of the meeting stated "there was strong support" for the approach that parties "voluntarily decline to authorize any applications to construct permanent land-based infrastructure to support tourism," although various delegations noted "under their current domestic laws it was difficult to prohibit" such facilities (Final Report XXVIII ATCM, paragraph 173).

Consequently, the meeting agreed to "re-visit this matter at ATCM XXIX" (to be held in Edinburgh, June 2006) (Final Report XXVIII ATCM, paragraph 174).

The Protocol and Self-Regulation by IAATO

For assessing the need of management measures by the ATCM regarding (semi)permanent tourist facilities, an important question is whether the private sector itself might be able to address the issue. Most of the tour operators active in the Antarctic cooperate under the umbrella of the International Association of Antarctic Tour Operators (www.iaato.org; Spletstoeser 2000). IAATO recently included the following new element in its bylaws (IAATO bylaws, Art. II, Section E): "Members of IAATO subscribe to the principle that their planned activities will have no more than a minor or transitory impact on the Antarctic environment."

This initiative is one of the examples of a management measure taken by the industry that goes beyond the obligations of the Protocol and illustrates, at least to a certain degree, the proactive approach by the IAATO member organizations. However, it may be questioned whether this bylaw revision adequately addresses the issue. For instance, the terminology "no more than a minor or transitory impact" derives from Annex I of the Protocol and establishes the threshold for the most comprehensive level of Environmental Impact Assessment, the Comprehensive Environmental Evaluation (CEE). In practice, such CEEs are only produced for major projects, such as the establishment of new research stations. It could therefore be argued that the bylaws do not block or prevent floating hotels, or facilities on land that may easily be removed (for example, facilities for camping during the summer season). Furthermore, the question is whether wilderness values are taken into account when making the assessment of the level of impact in an EIA process. If this is not the case, one could argue that a permanent hotel in an area with low biodiversity and scientific values will not cause a more than minor or transitory impact. This approach is not unlikely in view of the EIA-practice in which wilderness values receive very little attention (Bastmeijer 2005). An additional reason why the bylaws do not address the issue is the risk of 'free riders.' Tour operators that really want to go forward with their plans to establish permanent facilities for tourism in Antarctica may not become an IAATO member or may end their membership. Such examples already exist within the sector of ship-based tourism (for example, the *Marco Polo*).

Hotels in Antarctica: A Realistic Option?

Nature-based tourism is growing worldwide and remote areas are becoming increasingly popular (Eagles 2003). The developments in Antarctic tourism illustrate this trend. As discussed in the introduction of this contribution, the numbers as well as the diversity of activities are rapidly increasing. Probably because of the growing competition—tour operators are continuously developing their products by adding new (exciting) elements. For instance, the web site, Big Animals Expeditions, (<http://www.biganimals.com/newsletters/spring05/page1.html>) announced that the company will

use the hovercraft in the season 2005-2006 to facilitate scuba diving activities: "We will conduct ice landing and scuba diving exploration on mainland Antarctica remote islands and icebergs. Our ship will be equipped with a Hovercraft that can safely and efficiently transport all our gear and us over difficult terrain to selected diving locations." The company makes clear that its clients will certainly visit the wilderness in its purest form: "We are going to a part of Antarctica the fabled explorers never reached. There are no historical huts from the Edmonson or Ross expeditions. No footsteps of Shackleton to follow. Not even a National Geographic TV crew has been there. There's no one to follow. Our free spirit and sense of adventure will lead us."

This search for new products also relates to forms of transport to the Antarctic. It is clear that quite a number of people are reluctant to book a cruise to the Antarctic because they do not want to take the risk of experiencing sea illness for two or more days. Furthermore, flying to Antarctica enables shorter trips. Therefore, with the 'fly-sail' operations that were started two years ago, Antarctic tourism has expanded to a new segment of tourists.

These developments may well stimulate the development of plans for (semi)permanent tourist facilities. For instance, tour operators may find it interesting to combine their conventional cruising with activities ashore. There are already tour operators that offer camping options and in the future a tour operator may wish to further develop such activities. Tour operators may also wish to start snowmobile excursions, similar to the Arctic, and storage of the snowmobiles in small buildings would be efficient. At an international workshop on Antarctic tourism, held in New Zealand on 23 June 2000, Maj De Poorter stressed the "slippery slope risk"—slowly and step by step, Antarctic tourism (like other human activities) is developing and without a timely management response, (semi)permanent facilities in Antarctica are likely to be established.

Although this "slippery slope risk" may indeed be the most likely scenario, there is also the possibility of sudden and more substantive developments. Businesses with a substantial investment capacity may develop ambitious plans, for example to establish a hotel in Antarctica.

An interesting example was described in various Australian newspaper articles and reports in 1989. One of the articles states that a 'super salesman' from Sydney—a management director of a firm of cold-climate architects—was "trying to flog the seeming impossible idea, a 200 million \$US tourist center to be built in Australia's pristine Antarctic—and believe it or not, he could do it!" This project (Project Oasis) related to a three-capsule resort, planned near the Australian station Davis, including "a visitor centre, a hospital, research facilities and hovercraft to get around" (The Mercury, May 2 1989, p. 5). A 2,800 m (2 mile) long runway should enable Boeings 747 to land. The capsules "would be built in Sydney, floated to the Antarctic and slid across the ice into position" (New Scientist, May 20 1989, p. 4), a strategy that shows that the term 'land-based' facility, which is often used in the international discussion, is not necessarily covering all permanent facilities. According to the newspapers, the businessman expected "the total cost to be recouped 'very easily' within 15 years" (The Mercury, May 2 1989, p. 5).

This project was debated in the Australian Parliament and was therefore certainly not just a wild idea from a

businessman to attract media attention. The Australian government decided not to support this plan and had sufficient instruments to prevent Project Oasis from being conducted.

Conclusion: Should Antarctica be Preserved as a Wilderness Area?

Worldwide it is recognized that the relationship between tourism and the protection of natural areas is a complex one. On the one hand tourism can contribute to the protection of a natural area; tourism may play an important role in awareness raising and may provide financial means for taking necessary management measures. Tourism may also provide a natural area an economic value, which can be crucial for preventing more devastating activities, such as mining and, in certain parts of the world, logging. On the other hand, tourism may cause serious problems in natural areas, such as the introduction of diseases or non-native species of plants and animals, disturbance of animals, the disposal of waste or loss of wilderness. Tourist activities in Antarctica have also been recognized as "human activities that offer both threats and benefits to Antarctic conservation" (Phillips 1990: p. 98).

Probably because of this complex relationship and the environmental management measures adopted by the industry (through IAATO), for many years the ATCM has been reluctant to take legally binding measures in addition to the Protocol; however, the fast developments in Antarctic tourism explain why the call for such additional measures within the ATS has become much stronger. In comparison to the discussions in the 1990s, over the past few years more fundamental management issues have been debated, including the question whether the establishment of any new (semi)permanent facilities for tourism in Antarctica should be prohibited.

This question touches upon the meaning of Antarctica's designation as a nature reserve, devoted to peace and science (Article 2 of the Protocol). However, it is not so much a legal question but primarily a policy question. In the view of the present author, this question is of a similar character as the question on the acceptability of mineral resource exploitation that was discussed during the 1980s. Shortly after the decision of Australia and France not to sign and ratify CRAMRA, a representative of World Wildlife Fund stated:

As well as being amazingly beautiful, with spectacular land and ice formations, the Antarctic is the only part of the world that has never been permanently inhabited by people. When you consider the devastation that human beings have inflicted over almost all of the rest of the planet, from polluted rivers and seas to degraded forests, from overcrowded cities to the loss of topsoil, then the fact that there remains a continent almost as large as South America which so far is very little affected by human activities, is important to us emotionally and spiritually, as well as scientifically (Phillips 1990: p. 97).

This understanding could also be the most fundamental argument for the ATCM to adopt a tourism policy that prevents the establishment of (semi)permanent facilities for

tourism in Antarctica. This policy would make it possible for people to experience 'The Ice,' but ensure that ships will be the only visitor centers and hotels in the Antarctic.

The international debate on this issue will most likely be continued at the next ATCM, to be held in Edinburgh, June 12–23, 2006.

References

- Aplet, G.; Thomson, J.; Wilbert, M. 2000. Indicators of wildness: using attributes of the land to assess the context of wilderness. In: McCool, Stephen F.; Cole, David N.; Borrie, William T.; O'Loughlin, Jennifer, comps. 2000. Wilderness science in a time of change conference—Volume 2: Wilderness within the context of larger systems; 1999 May 23–27; Missoula, MT. Proceedings RMRS-P-15-VOL-2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 89–98. [Online]. Available: http://www.wilderness.net/library/documents/Aplet_2-12.pdf [April 5, 2006].
- ASOC. 2005. Doc. XXVIII ATCM/IP 71: Some legal issues posed by Antarctic tourism. Report submitted by ASOC. [Online]. Available: <http://www.ats.aq/28atcm/default.php,meeting documents, p. 13.> [April 5, 2006].
- ATME Report. 2004. Report of the Antarctic Treaty Meeting of Experts on Antarctic Tourism, Tromsø, Norway, March 2004. The report was submitted to the XXVIIth ATCM as a working paper (Doc. XXVII ATCM/WP 004) [Online]. Available: <http://www.ats.aq/27atcm/e/index.htm, under meeting papers, working papers.> [April 20, 2006].
- Australia. 2005. Doc. XXVIII ATCM/WP 38, Protection of Antarctica's intrinsic values: policy on non-government activities. [Online]. Available: <http://www.ats.aq/28atcm/default.php, meeting documents, p. 4.> [April 20, 2006].
- Bastmeijer, C. J. 2003a. The Antarctic Environmental Protocol and its domestic legal implementation. Doctoral thesis, International Environmental Law and Policy Series, Volume 65. The Hague: Kluwer Law International. 527 p.
- Bastmeijer, C. J. 2003b. Tourism in Antarctica: increasing diversity and the legal criteria for authorization. *New Zealand Journal of Environmental Law*. 7: 85–118.
- Bastmeijer, C. J.; Roura, R. 2004. Regulating Antarctic tourism and the precautionary principle. *The American Journal of International Law*. 98(4): 763–781.
- Bastmeijer, C. J. 2005. Managing human activities in Antarctica: should wilderness protection count? *New Zealand Yearbook of International Law*: 335–353.
- Blay, S. K. N. 1992. Current developments, new trends in the protection of the Antarctic environment: the 1991 Madrid Protocol. *The American Journal of International Law*. 86(2): 377–399.
- Brown, A. 1990. New proposal: the natural park. In: Verhoeven, J.; Sands, P.; Bruce, M. eds. *The Antarctic environmental and international law*. London/Dordrecht/Boston: Graham & Trotman: 97–101.
- Codling, R. 1998. Doc. XXII ATCM/IP 2. Submitted by the United Kingdom. [Online]. Available: http://www.cep.aq/MediaLibrary/asset/MediaItems/ml_381064756944444_IP%20002E.pdf. [April 20, 2006].
- Codling, R. 2001. Wilderness and aesthetic values in the Antarctic. *Polar Record*. 37: 337–352.
- Dingwall, P. R., ed. 1998. *Antarctica in the environmental era*. Wellington, New Zealand: Department of Conservation. 38 p.
- Eagles, P. F. J. 2003. International trends in park tourism: a macro view of park tourism finance. Paper presented at the World Park Congress, Durban South Africa, 8–19 September 2003. [Online]. Available: http://www.conservationfinance.org/WPC/WPC_documents/Apps_12_Eagles_v1.pdf. [April 20, 2006].
- Elliott, L. M. 1994. *International environmental politics, protecting the Antarctic*. New York: St. Martin's Press. 240 p.
- Final Report of the XVIth ATCM. 1991. Bonn. (On file with the author.)
- Final Report XXVIII ATCM. 2005. [Online]. Available: http://www.ats.aq/Atcm/atcm28/fr/atcm28_fr001_e.doc. [April 9, 2006].
- Germany. 2005. Doc. XXVIII ATCM/IP 20. The admissibility of land-based tourism in Antarctica under international law. (Written by Wolfrum, R.; Vöneky, S.; Friedrich, J.) [Online]. Available: <http://www.ats.aq/28atcm/default.php, meeting documents, p. 9.> [April 20, 2006].
- Goldsworthy, L. 1987. World Park Antarctica, an environmentalist's vision. In: Triggs, G. D., ed. *The Antarctic Treaty regime: law, environment and resources*. Cambridge: Cambridge University Press: 90–93.
- Heijnsbergen, P. Van. 1983. International protection of the Antarctic environment (article in Dutch). *Tijdschrift voor Milieu en Recht (Environment and Law Journal)*: 257–263.
- IAATO. 2005. IAATO overview of Antarctic tourism 2004-2005 Antarctic season. Doc. XXVIII ATCM/IP 82, submitted by IAATO [Online]. Available: <http://www.ats.aq/28atcm/default.php, meeting documents, p. 14.> [April 20, 2006].
- Keys, H. 1999. Towards additional protection of Antarctic wilderness areas. Information paper submitted by New Zealand to the CEP II meeting and the XXIIIth ATCM, May 1999. [Online]. Available: http://www.cep.aq/MediaLibrary/asset/MediaItems/ml_376356650578704_ip080e.doc [April 19, 2006].
- The Mercury. May 2, 1989, p. 5. Hobart, Tasmania. (On file with the author.)
- New Scientist. May 20, 1989, p. 4. Chatswood, Australia. (On file with the author.)
- New Zealand. 2005. Doc. XXVIII ATCM/WP 12. Land-based tourism in Antarctica. [Online]. Available: <http://www.ats.aq/28atcm/default.php, meeting documents, p. 1.> [April 20, 2006].
- Phillips, C. 1990. WWF's 1990 position on Antarctic conservation and the role of NGOs. In: Report of the first Latin American workshop of NGOs about Antarctic conservation; 1990 September 24-28; Santiago, Chile: 97–100.
- Redgwell, C. 1994. Environmental protection in Antarctica: the 1991 Protocol. *International and Comparative Law Quarterly*. 43: 599–634.
- Rothwell, D. R. 1990. A world park for Antarctica? *Antarctic and Southern Ocean Law and Policy, Occasional Paper 3*. (On file with the author.)
- Spletstoesser, J. 2000. IAATO's stewardship of the Antarctic environment: a history of tour operator's concern for a vulnerable part of the world. *International Journal of Tourism Research*. 2: 47–55.
- Stokke, O. S.; Vidas, D. 1996. Eds. *Governing the Antarctic: the effectiveness and legitimacy of the Antarctic Treaty System*. Cambridge: Cambridge University Press. 486 p.
- Working Group II Report. 1990. Report of Working Group II of the Chile-session of the XIth SATCM (19 Nov.–6 Dec. 1990). (On file with the author.)