

Tourism in the Antarctic

Modi Operandi and Regulatory Effectiveness

by

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Acronyms and abbreviations

AEPS	Arctic Environment Protection Strategy	HCA	Hydrographic Committee on Antarctica
AGM	Annual General Meeting	IAATO	International Association of Antarctica Tour Operators
ANI/ALE	Adventure Network International/Ad- venture Logistics & Expeditions	ICSU	International Council of Scientific Un- ions
ASMA	Antarctic Specially Managed Area	IEE	Initial Environmental Evaluation
ASOC	Antarctic and Southern Ocean Coalition	IFTO	International Federation of Tour Opera- tors
ASPA	Antarctic Specially Protected Area	IGY	International Geophysical Year
ASTI	Area of Special Tourist Interest	IMO	International Maritime Organization
AT	Antarctic Treaty	IUCN	International Union for the Conserva- tion of Nature
ATCM	Antarctic Treaty Consultative Meeting	LAC	Limits of Acceptable Change
ATCP	Antarctic Treaty Consultative Party	NAP	National Antarctic Programme
ATP	Antarctic Treaty Party	NGO	Non-governmental organisation
ATS	Antarctic Treaty System	NSF	National Science Foundation
ATME	Antarctic Treaty Meeting of Experts	Protocol	Protocol on Environmental Protection to the Antarctic Treaty
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources	SCAR	Scientific Committee on Antarctic Re- search
CCAS	Convention for the Conservation of Antarctic Seals	SEA	Strategic Environmental Assessment
CEE	Comprehensive Environmental Evalua- tion	UN	United Nations
CEP	Committee for Environmental Protec- tion	UNCED	UN Conference on Environment and Development
CHM	Common Heritage of Mankind	UNEP	United Nations Environment Pro- gramme
CI	Conservation International	WCED	World Commission on Environment and Development
CLIA	Cruise Lines International Association	WWF	World Wide Fund for Nature
COMNAP	Council of Managers of National Ant- arctic Programs	WTTC	World Travel and Tourism Council
CRAMRA	Convention on the Regulation of Ant- arctic Mineral Resource Activities	WTTRC	World Travel and Tourism Research Council
CRATA	Convention for the Regulation of Ant- arctic Tourist Activities		
EIA	Environmental Impact Assessment		

Abstract

Antarctic tourism represents the largest and fastest growing commercial activity on the Antarctic continent. Under consideration of its unprecedented growth and diversification, the Antarctic tourism sector is viewed with increasing scrutiny and concern. This concern is expressed in discussions surrounding the success and effectiveness of the existing regulatory framework for Antarctic tourism and asks what changes might be required to adequately protect the Antarctic continent in the future. Viewpoints and interests among Antarctic tourism operators, policy-makers, researchers and other stakeholders diverge, and Antarctic tourism is discussed as being either or both benefactor and detractor to the environmental and political integrity of Antarctica. This thesis discusses, regulations drawing on regime theory, the effectiveness of Antarctic tourism. It postulates the theory that the combined regulatory efforts of Antarctic Treaty Consultative Parties (ATCPs) and industry self-regulation through the International Association of Antarctica Tour Operators (IAATO) define the Antarctic tourism regime.

Using interviews and a Delphi study as the primary methods of inquiry, stakeholder viewpoints on regulatory and operational characteristics of Antarctic tourism were collected and integrated into a discussion of the effectiveness of the current regulatory regime and an assessment of potential options for regulating Antarctic tourism in the future. The interviews provide insights particularly into operational matters and the *in situ* practice of tour operators and their compliance with existing regulations. The Delphi study focuses on how the current regulatory issues are addressed, how rules and regulation are enacted and whether the current regulatory framework needs improvement.

The thesis research shows that Antarctic tourism stakeholders are concerned about the increasing scale and diversification of Antarctic tourism and generally subscribe to a conservation imperative when assessing potential options for the future regulation of Antarctic tourism. The Antarctic Treaty System is regarded as being stable and having matured over the years, although the regime has not been tested to any great extent. Tourism development in the Antarctic may well prove to be a first test of the stability and success of the Antarctic Treaty System. Stakeholders desire a continued strong partnership between Antarctic Treaty Parties and IAATO regarding the regulation of Antarctic tourism, but conclude that in view of the rapid development of Antarctic tourism, structural, institutional and legislative changes are necessary if Antarctic tourism regulation is to remain successful.

The thesis argues that these necessary changes do not inevitably involve a complete overhaul of the existing regulatory regime for Antarctic tourism and that a new overarching regulatory instrument such as a tourism convention may neither be the most desirable nor feasible approach to regulating tourism to the Antarctic. Instead, this thesis research suggests that regulatory improvements need to build on the strengths of the current regime and on a strategic vision that should guide the future regulation of Antarctic tourism.

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Foreword

Nature can survive without humankind, but humankind not without nature.

In embarking on the journey that my thesis research describes, I would never have expected that this would be a life-changing experience. Attempting to examine the effectiveness of the existing Antarctic tourism regulation and discuss future regulatory options, I soon found myself drawn into an arena of political sensitivities, intricacies and a multitude of interests. At the same time, I was overwhelmed by the openness, support and acceptance that I received from members of the Antarctic community. Despite my efforts of not permitting myself to become completely immersed and involved in the topic, the maintenance of an 'objective' detachment was virtually impossible. Antarctica claims your soul, they say.

The opportunity to spend an Antarctic season on board a cruise ship opened my eyes to some of the operational difficulties encountered on Antarctic expeditions as well as to the commendable practice of Antarctica tour operators. No incidents occurred, all IAATO and ATS regulations were meticulously adhered to and the expedition staff embraced a conservative and ecocentric approach to landings and encounters with wildlife. Nonetheless, the rapid development of Antarctic tourism that is reflected in the literature was also noticeable. Hardly a day went by without the sighting of another tourist vessel or yacht around popular sites in the vicinity of the South Shetland Islands. Is the Antarctic Peninsula area getting too crowded? In retrospective, I would say, possibly – Antarctica still possesses many lonely and unvisited sites, but at the most popular landing sites, the face of Antarctica and the nature of Antarctic tourism are permanently changed. What also has to be considered is that the job of an expedition leader, which involves communicating with other ships and coordinating landings, certainly becomes more difficult.

Obviously, my conversations with Antarctic tourism stakeholders and my own experiences in Antarctica have a bearing on this thesis research, which should not go unmentioned. With most, if not all, of the research participants, I share the passion for and belief in the intrinsic wilderness values of Antarctica and the ensuing efforts to protect these. I tried to take my own opinions out of the picture when analysing the results of the qualitative research and integrating them into an analysis of the effectiveness of Antarctic tourism regulation and succeeded in doing so to the extent that I was surprised by the outcome of this analysis. Nevertheless, I acknowledge that my own beliefs and experiences affected the research process and discussion of the results. Comparing the attached Appendices 1 & 2 to the rest of the thesis, the astute reader will notice that some aspects of the thesis research have slightly changed over time, as much as a result of gaining an understanding of the 'real' issues surrounding Antarctic tourism as my aforementioned experiences. The reader is asked to note that unless otherwise stated, the discussion and beliefs expressed in this thesis research represent my personal opinion and shall not be (mis)taken for those of any institution or involved stakeholder. All mistakes are mine, and the credit is theirs.

Daniela Haase
Christchurch, New Zealand

30 April 2008

INTRODUCTION



1 Introduction

Wilderness holds the answers to the questions we do not yet know how to ask. (Brower as quoted in Nash 1982, p. 198)

Unlike any other continent, Antarctica symbolises international cooperation and a dedication of the global community to peace, science and environmental protection in a region that does not have an indigenous population. Antarctica's future lies primarily in the hands of a consortium of countries that collectively govern the continent and shape its regulatory framework. Some regulatory attention is devoted to tourism, which is commonly regarded as the world's largest and fastest-growing industry (Hall & Page 2006; Theobald 2005; Mak 2003; Tisdell 2001).

In 2006, the World Tourism Organisation recorded approximately 842 million tourist arrivals internationally. The highest number of international tourist arrivals was reported by France (approximately 4.6 %¹ the size of Antarctica), which alone accounted for approximately 79.1 million visitors that year (UNWTO 2007)². According to the World Tourism Organisation, the United Nations (UN) region receiving the lowest number of international tourists in 2006 was Northern Africa, covering an area of a bit more than two-fifths the size of the Antarctic continent and reporting 14.9 million visitors (UNWTO 2007). By comparison, only a small number of tourists landed in Antarctica in the most recent two seasons. 29,530 visitors set foot on the Antarctic continent in the 2005/06 season and 29,356 in the 2006/07 season (IAATO 2007a).

Despite Antarctica's comparably low visitation rate, emotions run high among Antarctic scientists, environmentalists, Antarctic policy-makers and the interested public. Newspaper and magazine articles, on the one hand, encourage the sensitisation of the public to environmental concerns with respect to Antarctic tourism and, on the other hand, promote tourist voyages to the Antarctic by reflecting on the unique ecosystems and intimate encounters with wildlife travellers can experience. Articles with titles such as 'Bye Polar' (Garrett 2007), 'Limit on Ice Tourism' (Henzell 2007), 'Winter Wonderland' (Johnson 2007), 'Tip of the icebergs' (Flagler 2006), 'Tourism 'threatens Antarctic'' (Rowe 2006), 'The last wild place' (Mulvaney 1997) provide vivid evidence of the emotive, value-laden examination of Antarctic tourism issues in the public sphere³. An Antarctic tourism debate, which is publicly channelled as much as enflamed through journalistic endeavours in articles such as the ones mentioned above, is rooted then in the geopolitical stake a number of nations have in Antarctica and is emotionalised in an age of environmentalism that has gained momentum since the early 1970s⁴. This emotion is fuelled by considerations of the rapid increase in tourist numbers as much as by concerns about risks and accidents as recently illustrated by the sinking of the *M/S Explorer* in Bransfield Strait. Therefore, the effective regulation of Antarctic tourism may not have to be viewed only from a legislative and operational point, but also from the moral perspective of having to instil confidence in a concerned public.

¹ This figure includes the French overseas territories French Guiana, Guadeloupe, Martinique and Reunion.

² Provisional numbers as of 12 July 2007 (UNWTO 2007, p. 8)

³ The author acknowledges Jürgen Habermas (1989) who coined the term and regards the 'public sphere' as a network for communicating information, viewpoints and ideas, which eventually transforms these points of view into a public opinion.

⁴ In 1972, the first international conference on environmental issues, the United Nations Conference on the Human Environment, was held in Stockholm and led to the formation of UNEP. This UN Conference focused on the finite nature of resources and "marked the first wave of environmentalism in the modern age" (Sterling 1992, p. 224).

1.1 Focus and position of the research project

What is hardest of all? That which seems most simple: to see with your eyes what is before your eyes. (Johann Wolfgang von Goethe n.d.)

This thesis intends to inform the Antarctic tourism debate by contributing an analysis of stakeholder viewpoints on the effectiveness of the current regulatory regime for Antarctic tourism. Stakeholder viewpoints can provide another dimension to the discussion of Antarctic tourism regulation, particularly from the perspective of the desirability, feasibility and successful implementation of regulatory mechanisms. Although acknowledging the wider implications and applicability of tourism management tools and literature, this project is concerned with the regulation of Antarctic tourism. The detailed discussion and analysis of actual and potential management mechanisms goes beyond the scope of this thesis and represents a topic for future investigations.

The thesis draws on regime theory, with a focus on evaluating the effectiveness of international regimes, and situates them in an Antarctic tourism context. The relevant Antarctic tourism literature provides the foundation upon which the analytical exploration of stakeholder perspectives regarding the effectiveness of Antarctic tourism regulation is based.

As Figure 1.1.1 on Page 5 illustrates, of the whole range of human activities currently undertaken in Antarctica, this thesis research pays particular attention to ship-based tourism reflecting the current configuration of the Antarctic tourism sector (Landau & Spletstoesser 2007). Ship-based tourism constitutes the largest part of Antarctic tourism with approximately 95% of all Antarctic tourists visiting the continent on a ship-based itinerary (Hemmings & Roura 2003, p. 18; Dingwall & Cessford 1996, p. 65). For this reason, as well as for illustrative purposes, only the ship-based tourism tree in Figure 1.1.1 has been further developed in this thesis, although it is acknowledged that, similarly, all other forms of tourism (air-borne, land-based or combinations thereof) can have commercial and non-commercial aspects and might comprise members and non-members of the International Association of Antarctica Tour Operators (IAATO). However, other tourism activities are also briefly discussed in this thesis due to their connections and interactions with ship-based tourism and due to the respective regulatory implications.

In order to elucidate the objectives of the thesis research, the following sections in this Chapter firstly outline the rationale for the research and its contribution to knowledge, secondly touch on matters that influence the Antarctic tourism debate and, thirdly contextualise the research with a brief, non-exhaustive overview of the following issues:

- the conservation argument with respect to Antarctica,
- the current scale of the Antarctic tourism sector with an outlook of potential future developments and related concerns, and
- diverging interests among stakeholders and their implications for Antarctic tourism regulation.

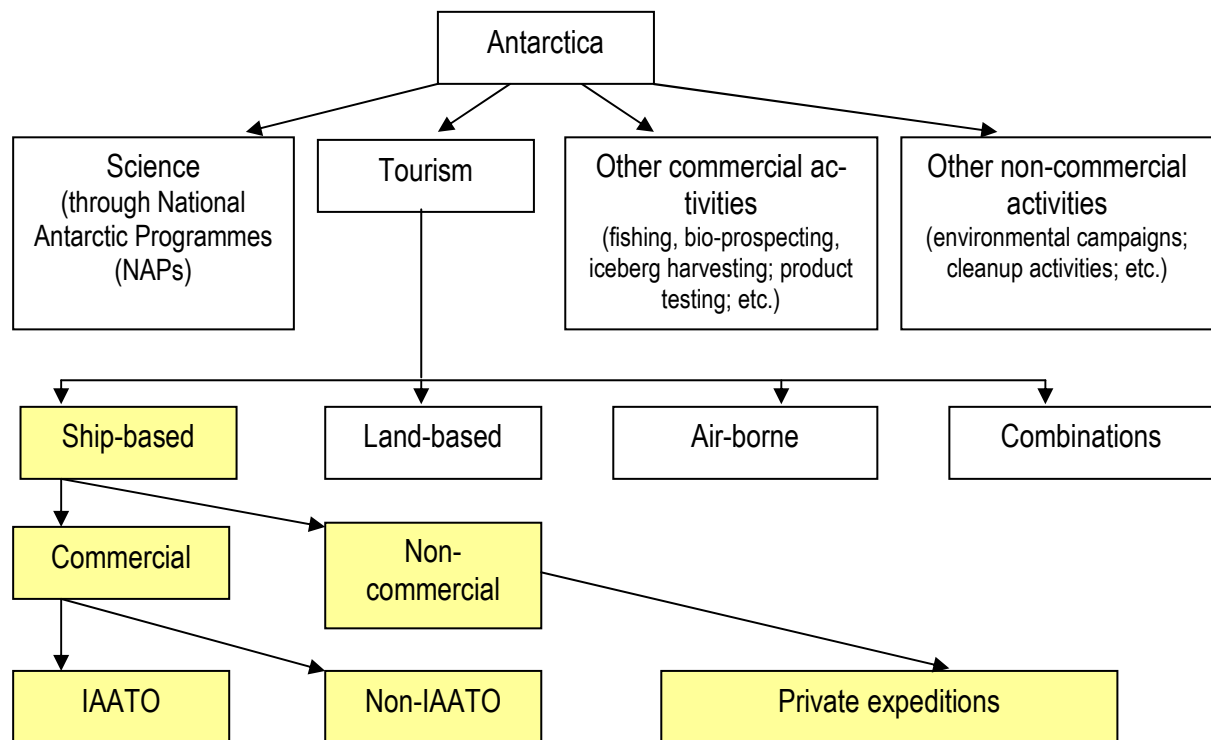


Figure 1.1.1: Identification of the research focus by activity level

1.2 Rationale for the research and its contribution to knowledge

There is no knowledge that is not power. (Ralph Waldo Emerson n.d.)

Many different interests are involved in the operation, discussion, assessment and regulation of Antarctic tourism, which potentially results in clashes of opinion and values and makes regulating Antarctic tourism a delicate issue. So far, little scientific evidence is available to inform policy-making. Since the 1990s, researchers have emphasised the need for an in-depth analysis of Antarctic tourism, primarily focusing on its impacts on the environment (Richardson 1999; Dingwall & Cessford 1996, p. 68; Enzenbacher 1995a; Enzenbacher 1992a). The call for additional research on the regulation and management of polar tourism was further accentuated by Mason & Legg (1999), and has been recently advocated by Stewart *et al.* (2005) and Haase (2005).

Under consideration of the recent developments in Antarctic tourism – the rapid increase in scale and range of activities offered – investigations into the impact of tourism have to be accompanied by an assessment of the manageability of Antarctic tourism. It has to be determined whether the regulatory regime can adequately deal with the evolving Antarctic tourism sector. How can conclusions derived from an evaluation of tourism impacts be translated into meaningful regulation? Is more regulation needed? If so, what form should this regulation take? To date, these questions have remained largely unanswered and provide a focus for the contribution of this thesis research to the current knowledge base on Antarctic tourism.

Criticism has been voiced over how the Antarctic Treaty Consultative Parties (ATCPs) tackle tourism regulation (Hemmings & Roura 2003; Richardson 1999; Pineschi 1996; Foreman 1991–1992; Beck 1990), as well as how IAATO self-regulates in an attempt to pre-empt stringent regulation by the ATCPs (Enzenbacher 2007; Bastmei-

jer & Roura 2004; Mason & Legg 1999). Indicative suggestions about necessary regulatory adaptations have been articulated (Enzenbacher 2007; Molenaar 2005; Hemmings & Roura 2003; Scott 2001; Kriwoken & Rootes 2000; Richardson 1999; Enzenbacher 1992a; Hall 1992), but so far, no comprehensive evaluation of Antarctic tourism regulation has considered these proposals for improvement along with their feasibility and implications from the viewpoints of the stakeholders involved.

So far, an assessment of the effectiveness of an Antarctic tourism regime from the perspectives of stakeholders is wanting (Stewart *et al.* 2006). Consequently, Stewart *et al.* (2005, p. 390) encourage future Antarctic tourism research to focus on the relationship between National Antarctic Programmes (NAPs) and tourism, and on the effectiveness of tourism regulation through the Antarctic Treaty System (ATS) as well as through self-regulation. This thesis research evolved from the realisation of the previously mentioned gap in Antarctic tourism research. It is concerned with the effectiveness of Antarctic tourism regulation and approaches the topic from a qualitative and multi-paradigmatic stance.

Guided by the overarching question

Faced with the challenges of multinational governance and an increasing diversification and growth of tourism, can the Antarctic tourism regime effectively regulate tourism in the Antarctic?

this thesis research aims to achieve the following two goals:

- 1.) To evaluate the effectiveness of the current regulatory regime for Antarctic tourism drawing on the ethos and practices of Antarctica tour operators.
- 2.) To discuss the future implications of Antarctic tourism regulation (based on considerations of the current regulatory regime for Antarctic tourism and the evaluation of its success).

Goal 1 looks at the configuration of the present Antarctic tourism regulatory regime and its effectiveness and adequacy as well as the ethos and *in situ* practice of Antarctic tourism. Fulfilling this goal requires the consideration of issues such as the motives for self-regulation; the rigour of written guidelines, bylaws and codices; conflicts between these 'written' guidelines and practice; and the adequacy of monitoring efforts.

Goal 2, on the other hand, is fundamentally future-oriented in that it attempts to provide indicators for the design of an effective and adequate regulatory regime for Antarctic tourism. As such, it may be used to validate and qualify the findings from the interviews that led to an assessment of the effectiveness of the current Antarctic tourism regulation.

To summarise, this thesis asks whether the current regime can effectively regulate Antarctic tourism. The thesis aims firstly to analyse the present configuration, adequacy and effectiveness of Antarctic tourism regulation, and secondly to derive suggestions for future Antarctic tourism regulation.

This thesis research expands the current base of knowledge in the field of Antarctic tourism research by providing an analysis of the perspectives of Antarctic tourism stakeholders regarding tourism regulation. By combining the viewpoints of tour operators, policy-makers and representatives of environmental organisations, the thesis allows conclu-

sions to be drawn on how formal regulation is lobbied for, decided on, interpreted and potentially put into practice. Stakeholder perspectives on regulatory issues, particularly where tour operators are concerned, represent invaluable information on the practicality, feasibility and rigour of implementation of Antarctic tourism regulation. On these issues, qualitative data have been scarce, and this thesis aims at filling this gap in order to gain a rich, in-depth representation of the different realities and dimensions that influence the success of any approach to regulating Antarctic tourism. Thus, at the heart of this thesis lies a qualitative data collection strategy, which is suited to examining highly complex social and political systems – such as the ATS – that are dominated by “contesting worldviews” (Hollinshead 2004a, p. 69; Ezzy 2002). Interpretive qualitative methods were chosen as appropriate tools to explore the different realities of Antarctic tourism stakeholders and contrast them with current and potential regulatory mechanisms.

1.3 Boundaries and assumptions of the research

The future influences the present just as much as the past. (Friedrich Nietzsche n.d.)

This thesis is not meant to serve as a compendium on tourism management literature or a comprehensive treatise analysing past Antarctic tourism research. A general overview of the cornerstones of Antarctic tourism is presented in Chapter 3 under consideration of a range of contributions to Antarctic tourism research to give context to the thesis research. However, only a select set of suitable tourism and policy and planning literature supporting the discussion of the effectiveness of Antarctic tourism regulation is looked at in detail to give relevance and justification to the specific objectives of this thesis.

Moreover, although appreciating theorising and literature on the various forms that tourism can take, this thesis will abstain from moving the discussion on the forms tourism can take into an Antarctic context. Specifically, the researcher was confronted with the dilemma of encountering a seemingly interchangeable and synonymous use of the terms ecotourism, nature tourism and adventure tourism, not only in the literature but also in conversations with Antarctic tourism stakeholders. Because of, the conceptual ambiguity in connection with the usage of the aforementioned terms (Page & Dowling 2002, p. 223), and also due to the researcher’s own preferences, this thesis makes consistent use of the general term ‘tourism’. The interested reader is referred to other authors, for instance Fennell (2003), Mowforth & Munt (2003), Page & Dowling (2002), or Holden (2000) for in-depth discussions regarding the various forms of tourism and potential ambiguities of the terminology. A critical assessment of contemporary (eco)–tourism phenomena and issues is provided in a recent compilation of scholarly works edited by Higham (2007).

Further, the thesis aims neither at providing an exhaustive overview of the complete literature pertinent to Antarctic governance, nor at presenting a detailed discussion of the geophysical, environmental and geopolitical characteristics of the Antarctic continent, or of the importance of preserving Antarctic ecosystems. As explained in the following paragraph, the importance of preserving Antarctic ecosystems is considered as an unambiguous paradigm, which informs and directs regulatory efforts. Codified in the Protocol on Environmental Protection to the Antarctic Treaty (Protocol), the aim of maintaining the integrity of the Antarctic environment affects how human activities in Antarctica are regulated and conducted.

The reader will note that the thesis makes one central assumption: that the ultimate goal of the regulation of human activities in the Antarctic is to maintain the relatively pristine wilderness character⁵ and the ecological integrity of the Antarctic continent. This assumption is rooted in a late 20th/early 21st century notion of environmental ethics and the responsible use of resources (Light 2002; Hettinger & Throop 2001; Des Jardins 1997; Marshall 1993; Sterling 1992). The conservation imperative represented by this assumption could be regarded as a limitation of the thesis as it precludes a discussion of unlimited exploitation of Antarctic resources and the respective regulatory implications *per se*. From a philosophical point of view, such a self-imposed limitation should indeed be considered as a failure to capture the bigger picture. However, from a practical point of view, the literature indicates that nothing but a conservation imperative is imposed upon discussions of commercial activities in Antarctica (Enzenbacher 2007; Snyder 2007a; Hemmings 2004a; Riddle 2000; Summerson & Riddle 2000). In fact, the author of the thesis has yet to locate one publication that approaches the topic from a purely utilitarian position and not from the viewpoint of environmental pragmatism⁶. Aside from that, the principle of environmental protection is fundamental to all instruments of the ATS, which would deem a serious discussion of Antarctic tourism from a utilitarian angle pointless. Finally, from a pragmatic viewpoint, the adoption of a conservation imperative allows for a deeper discussion of regulatory issues with a clear structure and purpose.

1.4 Context of the research

Management of polar regions, including monitoring, surveillance, and enforcement, is ... more expensive and difficult because of the large areas involved, the poor weather conditions, the great distances from adequate port and supply facilities, and the political realities of international arrangements. The world still lacks managers, inspectors, and enforcers to cover international agreements. (Salm & Clark 1984 as cited in Clark & Perry 1996, p. 316)

After having introduced the focus and contribution of the thesis, it is important to look at the wider context in which the research topic is nestled and to hint at the complexity of the nexus of stakeholders and issues pertinent to Antarctic tourism. Doing so will help position the researcher with respect to the research topic and will indicate some practical limitations of the research due to the multi-disciplinary nature of the topic, its emotive undertones and the intricacy of interests and issues at stake.

Antarctica has been heralded as the last great wilderness on earth (Polk 1998, p. 1403), and as simultaneously of considerable importance for the regulation of world climate and ocean circulation (Vogler 1995, p. 79). The number of relatively pristine wilderness areas on earth has diminished considerably over the last century whilst at the same time conservation movements⁷ have gained in importance, showing that wilderness areas are worth protecting (Sessions 1992). Polk (1998, pp. 1402–1403) argues that the preservation of Antarctica is of significance, not only because of the scientific value of the continent, but more importantly because of its inherent, intrinsic wilderness value

⁵ It has to be noted though that attributing a 'pristine' character to the Antarctic environment is, from a technical perspective, not correct. Over years, Antarctica has been impacted on and contaminated by humankind and although contamination from industrial and other pollutants is far less than in other areas, its presence cannot be denied and Antarctica "remains only relatively free from man-made pollution and damage" (Stonehouse & Snyder 2007, p. 38).

⁶ Environmental pragmatism, which was coined in the early 1990s by Andrew Light, focuses on influencing the political discussion and decision-making processes where environmental protection is concerned (Palmer 2003, p. 32).

⁷ See for instance, the United Nations Environment Programme (UNEP), the World Wide Fund for Nature (WWF), Conservation International (CI), or the International Union for the Conservation of Nature (IUCN).

as one of the last remaining places in the world that are largely undisturbed. Antarctica's isolation and extreme climate have helped it maintain a wilderness character (Polk 1998, p. 1395), but the continent is "decreasingly protected by its inaccessibility in terms of time, cost, distance or even comfort" (Prosser 1995, p. 119). Barriers to access, such as seasonal ice coverage, exist but their strength is likely to decrease as warming of (parts of) the polar regions adversely affects the extent of the sea ice, thus raising the number of accessible sites and lengthening the season (Snyder & Stonehouse 2007b, p. 7; Stonehouse & Snyder 2007, p. 40). Further, barriers of entry to the polar regions such as cost of travel crumble with an increasing number of tour operators offering trips to the Antarctic and decreasing prices for these trips (Snyder & Stonehouse 2007b, p. 11). In the 1990s, the collapse of the Soviet Union resulted in the availability of icebreakers and vessels of the academic fleet for long-term charter on the free market creating new opportunities for tour operators to extend the scale and range of activities offered (Landau & Spletstoesser 2007, p. 200; Snyder & Stonehouse 2007b, p. 9; Molenaar 2005).

Consequently, over the last decade, Antarctic tourism experienced an exponential growth in numbers and activities. As outlined in numerous publications (Haase 2005; Molenaar 2005; Bastmeijer & Roura 2004; Hemmings 2004a; Bastmeijer 2003; Hemmings & Roura 2003; Mason & Legg 2000; Richardson 1999) and substantiated by Antarctic tourism statistics assembled and published by IAATO (e.g. 2006a & 2007a), Antarctica has become a more popular and accessible destination since the 1990s. Access to Antarctica has improved due to technological advancements, which increasingly deprive Antarctica of its geographical and physical 'gatekeepers' such as its relative remoteness and the hostility of its environment (Prosser 1995, p. 119). Although a genuine causal relationship still has to be established, some researchers have argued that the consequences of climate change – predominantly extended seasons and the decreased ice coverage in the summer months in the Antarctic Peninsula region (McCarthy *et al.* 2007) – contribute to improved accessibility indirectly providing additional opportunities for tour operators (Lamers *et al.* 2008; Enzenbacher 2007, p. 179; Johnston 2006). Antarctica's popularity as a tourist destination has increased because of a myriad of factors, including greater disposable income and more spare time at the hands of many citizens in Western countries, as well as the media attention Antarctica receives as a continent of extremes, largely undisturbed wildlife and challenging mountaineering and adventure sports attractions (Hansom & Gordon 1998, p. 252).

Powell (2006) provides an interesting and thought-provoking glance into what he sees as the future of Antarctic tourism. Sustained growth in tourist and operator numbers along with more vessels cruising Antarctic waters will create greater pressure on popular sites. More flights will be offered to and within Antarctica, and greater interaction and potentially interference with research activities is anticipated by Powell (2006). So far, developments in the Antarctic tourism market reinforce Powell's (2006) predictions and affect discussions during the Antarctic Treaty Consultative Meetings (ATCMs). These discussions represent as well as focus the political decision-making process reflecting the steps taken towards the formulation of tourism regulation within the ATS, particularly as regulatory mechanisms are based on consensus decisions by the ATCPs. Viewed against the background of sovereignty claims in Antarctica that have been issued by seven states, jurisdictional issues persist, as claimant states remain unable to regulate tourism *per se* in 'their' sectors of Antarctica.

Politically, Antarctic tourism has been an important item on the agenda of ATCMs since the mid-1990s, when the rapidly increasing numbers of visitors to the Antarctic started to raise concern among Antarctic Treaty Parties (ATPs). The question of a commercial usage of the *frozen commons*, as Joyner (1998) eloquently described Antarctica, has been discussed by a variety of international environmental institutions. The International Union for the Conservation of Nature (IUCN), the United Nations Environment Programme (UNEP), the World Wide Fund for Nature (WWF), the Antarctic and Southern Ocean Coalition (ASOC), and Greenpeace, all embraced Antarctic issues for discussion in their agendas. The main commercial pressures on Antarctica originate from fishing, tourism, bio-prospecting and support activities (Hemmings 2004a, p. 6), although tourism is the only commercial activity that makes use of the Antarctic continent as a resource itself (Stewart *et al.* 2006, p. 196).

Aside from the obvious rise in Antarctic tourist numbers and activities, topics that form part of the Antarctic tourism debate include liability and jurisdictional issues, safety and rescue operations, and environmental impacts of tourism to the Antarctic. These environmental impacts can include bio-security issues (Curry *et al.* 2005; Frenot *et al.* 2005), wildlife disturbance, littering, safety and rescue operations, fuel leakages, the potential erection of land-based tourism infrastructure, and accidents and emergencies (Pfeiffer & Peter 2004; Mason & Legg 2000, p. 360; Hall 1992, p. 6).

The examples that have been touched on above illustrate that Antarctic tourism is a highly sensitive topic, which involves many stakeholder groups with a wide range of interests. Polk (1998, pp. 1395–1396) identifies four main stakeholder groups in Antarctica: governments, scientists, the commercial industry, and conservationists. The stakeholder group 'governments' takes account of NAPs as the scientific-logistical arm of ATPs, and the administrative and policy level of ATP and non-ATP governments themselves. Non-ATPs are included in this scheme as Third Party states can play a significant role in shaping the Antarctic tourism debate. The 'commercial industry' incorporates the Antarctic tourism operators themselves, IAATO, as well as other commercial beneficiaries relying on Antarctic resources such as Southern Ocean fisheries, bio-prospectors, and occasionally the movie industry. 'Conservationists' encompass national environmental NGOs as well as international institutions. When referring to Antarctic tourism stakeholders, this thesis essentially applies Polk's (1998) delineation of stakeholder groups in Antarctica with the minimal adjustment of limiting the 'commercial industry' to organisers of Antarctic tourism and its logistical support activities. In addition to Polk's (1998) categorisation of the main stakeholder groups in Antarctica, tourists could either be added separately, as they form a growing pool of Antarctic constituents, or could be considered as the driving force behind, and thus as part of, the commercial industry. Overall however, as argued by Murray & Jabour (2004, p. 309), human utilisation of the Antarctic continent is governed by two main and influential groups: NAPs and IAATO.

The primary interests of NAPs rest within the utilisation of the continent for science, within potentially supporting political ambitions and sovereignty claims (Enzenbacher 2007). Enzenbacher (2007) and Scott (2001, p. 970) suggest that some countries, such as Chile and Argentina, support tourism activities in the Antarctic Peninsula region because tourism represents a tool to reinforce their sovereignty claims and gain economic benefits. Environmental groups generally promote the conservation of the Antarctic and caution ATPs to limit or strictly regulate tourism (Hemmings 2004a & b). The tourism industry takes pride in applying strict guidelines to limit and reduce the envi-

ronmental impact of tourism activities in order to preserve the quality of Antarctica as the tourism destination, but it also lives off tourism. The latter implies that it is not likely that the tourism industry will be enthusiastic about strict outside regulation being imposed upon tour operators. Overall, the interests of Antarctic tourism stakeholders range from an extensive utilisation of Antarctica for mass tourism to ecologically conscientious and low-impact forms of tourism to greatly limiting access to the Antarctic for lay people in order to preserve it for science. It can confidently be said that the Antarctic continent is “enshrouded in the powerful logic of the new environmental ethic and enmeshed by equally powerful political and economic tensions” (Prosser 1995, p. 113).

Antarctica’s wilderness values, dispersed interests and stakeholder groups, a contentious set of issues, which are commonly referred to as ‘problems’, and a politicised view reinforced by power struggles between “agencies of progress and the opposing forces of preservation” (Mason & Legg 1999, p. 73) represent the delicate building blocks of the Antarctic tourism regime. Cast against the background of the ATS as the framework for a consortium of 46 countries – 28 of which have decision-making power – to govern the Antarctic continent, Antarctic tourism issues become a delicate and challenging tightrope walk. No other continent or region has come so clearly “to symbolise the conflict between exploitation and conservation, between claims to territory and recognition that no one single country should have rights to declare any part of that uninhabited continent its own” (Bunyard 1991, p. 17).

This section has shown that this thesis is situated within a highly complex, dynamic and multi-disciplinary system that is influenced by the scale and scope of various commercial activities, the presence and undertakings of NAPs, international geopolitical interests, public and scientific debates on the permissible extent of human activity in Antarctica and a unique governance situation. When discussing Antarctic tourism regulation these issues cannot be ignored – they affect the research setting as much as the researcher and research participants, prohibiting a linear, mono-disciplinary and static approach to the thesis research and analysis of the results obtained.

1.5 Structure of the thesis

You have your way. I have my way. As for the right way, the correct way, and the only way, it does not exist. (Friedrich Nietzsche n.d.)

Chapter 2 explains the linkages between the research questions and a selection of suitable research methods. It further presents a detailed account of the paradigmatic position of this thesis along with the justification for the selection of a qualitative methodology involving interviews and a Delphi study as primary mechanisms for data collection.

Chapter 3 provides an overview of the cornerstones of Antarctic tourism in order to provide essential background information for an informed and detailed discussion of the Antarctic tourism regulatory regime and stakeholder perspectives. With the examination of Antarctic tourism concepts and context, Chapter 3 introduces the first layer of building blocks upon which the thesis argument rests.

Chapter 4 presents the second layer of building blocks upon which the thesis argument is based and sets the scenes by positioning this research conceptually and functionally with regard to current theory, literature and peripheral is-

sues that inform this research or influence decision-making for Antarctic tourism regulation. Close attention is paid to the characteristics of the ATS and the concept of regime effectiveness.

Chapter 5 discusses the results of the interviews and assesses the success of self-regulatory tools employed by IAATO in contrast to Antarctic tourism regulation by the ATCPs. It presents data in support of an evaluation of the effectiveness of Antarctic tourism regulation and outlines stakeholder perspectives on the ethos and practice of Antarctica tour operators.

Chapter 6 analyses the results obtained from the Delphi study and discusses aspects of the current regulatory regime, the anticipated future development of Antarctic tourism and cornerstones of present and potential future regulation of Antarctic tourism regulation. Options for potential future Antarctic tourism regulation are examined from the perspective of their desirability and feasibility.

Chapter 7 links the results of the interviews and the Delphi study to the conceptual discussion of regime effectiveness in Chapter 4. It aims at evaluating and discussing the effectiveness of Antarctic tourism regulation based on the results of the qualitative research. This Chapter further suggests potential approaches to maintaining and achieving adequate and effective regulation of Antarctic tourism in the future.

Chapter 8 concludes the thesis with a short summary of the main ideas presented. The conclusion reiterates the key findings from the perspective of regime theory and comments on the usefulness of regime theory to assess the effectiveness of Antarctic tourism regulation. It also provides an overview of the policy-related recommendations that can be derived, a critical review of the suitability of the research methodology, and suggestions for future Antarctic tourism research.

Throughout these eight Chapters, the thesis establishes the links between the cornerstones of Antarctic tourism practice, stakeholder perspectives of operational and regulatory realities and future options as well as policy and planning literature dealing with the issues of regime effectiveness and tourism regulation in order to assess the effectiveness of the regulatory regime for Antarctic tourism. The main contribution of the thesis to knowledge is represented by the utilisation of stakeholder viewpoints in conjunction with regime-theoretical concepts:

- firstly, to gain an understanding of the performance and adequacy of regulatory mechanisms currently in place for Antarctic tourism, and
- secondly, to discuss options for the future regulation of tourism to the Antarctic in response to the development of Antarctic tourism as anticipated by stakeholders.

CHAPTER 2



2 Methodological considerations

We know very little, and yet it is astonishing that we know so much, and still more astonishing that so little knowledge can give us so much power. (Bertrand Russell n.d.)

As Antarctic tourism stakeholders are primarily the ones that determine the operational aspect of the regime and how it is put into practice, the researcher considers a qualitative approach capturing the viewpoints and experiences of Antarctic tourism stakeholders central to a meaningful critique of an Antarctic tourism regime.

As outlined in the previous Chapter, this research aims at evaluating the effectiveness of Antarctic tourism regulation under consideration of the following principal question:

Faced with the challenges of multinational governance and an increasing diversification and growth of tourism, can the Antarctic tourism regime effectively regulate tourism in the Antarctic?

This thesis research pursues two primary goals. Firstly, the research aspires to assess the effectiveness of the current Antarctic tourism regulation based on stakeholder perspectives regarding the ethos and practices of Antarctica tour operators. Secondly, the project seeks to examine options for the future regulation of Antarctic tourism under consideration of the constitution of the current regulatory regime and potential future developments in the Antarctic tourism sector.

Analysing Antarctic tourism regulation as it is practised at present, the first goal of the thesis research entails the examination of the acceptance, implementation and monitoring of regulations. This goal may be pursued through the analysis of Antarctic narratives and commentaries captured in the form of semi-structured interviews with those involved in Antarctic tourism practice, regulation or monitoring. Interviews can capture a diversity of opinions, can explore some gaps in knowledge and represent a method that “shows respect for and empowers those people who provide the data” (Dunn 2000, p. 52). Given the politically sensitive nature of the topic, as well as the status of the participants, this respect needs to be reflected in the research project.

Intending to qualify findings from the interviews and substantiate them with indicators necessary to judge the effectiveness of Antarctic tourism regulation and its adaptive capabilities in response to future developments, the second goal of the research project is essentially future-oriented. For this kind of future-oriented analysis the views and expertise of a wide range of Antarctic stakeholders – Antarctic scientists, policy-makers, tourism and other social science researchers, tour operators and environmentalists – are needed. A successful approach towards meeting this goal seems to rely as much upon the need to involve ‘expert’ opinion as on a creative interaction with possible future policy options. To fulfil these requirements, a Delphi study, building on and furthering inferences from the interviews, was undertaken.

Further, this Chapter provides a synopsis of the paradigmatic positioning of this thesis research and discusses the research approach and process. It shows that an inductive, multi-paradigmatic approach is suited to investigate

stakeholder perspectives on Antarctic tourism regulation. Moreover, detailed accounts and justification of both methods, the interviews and the Delphi study, are included in this Chapter.

2.1 *Ontology, epistemology and methodology: paradigmatic considerations*

We have always sought explanations when it was only representations that we could seek to invent. (Paul Valéry n.d.)

In his definition of paradigms, Guba (1990) successfully captures the essence of the term whilst maintaining a broadness that allows the definition to be applied to a wide variety of disciplines and fields of inquiry. He describes a paradigm as simply “a basic set of beliefs that guide action” (Guba 1990, p. 17) and regards inquiry paradigms as “those paradigms that guide disciplined inquiry” (Guba 1990, p. 18) under consideration of the underlying ontological, epistemological and methodological questions.

Whilst by answering these questions either consciously or subconsciously researchers place their research within (or between) certain paradigms, qualitative researchers need to go to greater lengths in clarifying their position with regard to the research topic, context, process and their paradigmatic preferences. The reflectivity and reflexiveness that are required of qualitative researchers (Goodson & Phillimore 2004; Hall 2004; Hollinshead 2004b) serve as mechanisms for achieving greater credibility and transparency of the research process and findings, as well as illustrating the relativity of the findings.

Especially in tourism studies, where “power and politics always play an important ... role in the existence, creation and/or development of receptive audiences for research projects” (Hollinshead 2004a, p. 77), the paradigmatic positioning of researchers and their projects is complicated by the multitude of disciplines, phenomena and paradigms that can shape and inform the research process (Hall 1994). Maybe these difficulties prevent tourism researchers from making use of critical qualitative research approaches more often (Hollinshead 2004a, p. 66), but they certainly do not decrease the need for insightful qualitative tourism research that considers the richness and diverse facets of tourism phenomena.

This thesis research offers the opportunity to engage in qualitative research and an in-depth deliberation of the associated ontological, epistemological and methodological questions that have been hinted at in the first paragraph of this section. Although reflections on the paradigmatic position of a research project can start out as tedious, but necessary, exercises, they easily turn into an exhilarating and enjoyable journey into the depths of the philosophical foundations of the project itself and the researcher’s fundamental belief system, which extends beyond the research at hand. This is not to say that the journey is straightforward and uncomplicated. On the contrary, it symbolises travelling along a winding road with a number of conceptual obstacles that can be traced back to the existence of a rather limited catalogue of well-accepted inquiry paradigms.

There are four main inquiry paradigms, which are described in detail by Guba (1990) and Lincoln & Guba (2000) and are illustrated in Table 2.1.1 on Page 17.

Table 2.1.1: Inquiry paradigms and their belief systems

	Positivism	Postpositivism	Critical Theory	Constructivism
Ontology	<i>Realist</i> ('naïve' realism – there is a 'real' reality out there, driven by natural laws, that can be studied)	<i>Critical realist</i> (there is a 'real' reality out there, driven by natural laws, but it cannot be completely understood – only probabilistically)	<i>Critical realist</i> (historical realism – over time reality has been shaped by socio-cultural, political, economic and ethnic values)	<i>Relativist</i> (there is not one, but multiple subjective-objective realities out there, all of which are constructions created by the mind and a given cosmos)
Epistemology	<i>Objectivist</i> (researcher can and has to adopt a distant and non-interactive stance to obtain value-free and unbiased results)	<i>Modified objectivist</i> (ideally objectivity is to be achieved, but the influence of the researcher on the findings is acknowledged)	<i>Subjectivist</i> (value-driven inquiry with the research process strongly related to the values of the researcher)	<i>Subjectivist</i> (findings of research are regarded as the product of the interaction between the researcher and the researched)
Methodology	<i>Experimental/manipulative</i> (inquiry pursues the aims of verifying/falsifying hypotheses stated in advance)	<i>Modified experimental</i> (inquiry uses multiple methods, possibly incl. qualitative methods, to critically verify/falsify hypotheses)	<i>Dialogic/transformational</i> (inquiry shaped by the aim of using dialogue to transform the views of participants, to eliminate 'false consciousness')	<i>Hermeneutic/dialectic</i> (consideration, hermeneutic refinement and dialectic comparison of a range of individual constructions with the aim of generating one or a few constructions that are relatively consensual)

Sources: Lincoln & Guba (2000); Guba (1990)

Although the main inquiry paradigms whose cornerstones are illustrated in Table 2.1.1 have been amended and modified by various researchers (see, for instance, Zahra 2006; Jennings 2001; Denzin & Lincoln 2000; Lincoln & Guba 2000), they have proven to be very robust in terms of their general applicability and acceptance by researchers. The modifications referred to above have been rather limited. Denzin & Lincoln (2000) and Lincoln & Guba (2000) adopt Guba's (1990) four main inquiry paradigms and merely add participatory theory as a fifth, stand-alone paradigm, which Guba (1990) includes within critical theory. Similarly, feminism – one of the additional paradigms discussed by Zahra (2006) – is contained within Guba's (1990) critical theory paradigm.

When considering inquiry paradigms applied to qualitative tourism research, Hollinshead (2004a) adopts Guba's (1990) four main inquiry paradigms, as do Goodson & Phillimore (2004), who also encourage researchers to analyse and criticise the paradigmatic influences their research is exposed to. The only difference Goodson & Phillimore (2004) introduce to their discussion of the main inquiry paradigms rests with a denotative change. Where Guba (1990) talks of a constructivist paradigm, Goodson & Phillimore (2004) refer to an interpretive paradigm. The characteristics of the constructivist and interpretive paradigms are essentially the same, and it is unclear why Goodson & Phillimore (2004) change the terminology, especially since the term interpretive paradigm seems to be more ambiguous. Particularly critical theory represents another paradigm that heavily relies on the subjective inter-

pretation of reality – or rather, how reality should be – and thus, is to be regarded as ‘interpretive’ in nature. In fact, Habermas (1978) argues that any form of acquiring knowledge that is driven by practical interest, i.e. interest that aims at gaining understanding of a phenomenon, characterises an interpretive inquiry. For these reasons, this thesis adopts Guba’s (1990) broad classification of paradigms and discusses their applicability within the framework of this Antarctic tourism research project.

The following paragraphs are meant to give an impression of the journey the researcher embarked on in search of a suitable paradigm for this project. To start at the beginning, the ontological question, which asks about the nature of reality or the nature of human beings (Denzin & Lincoln 2000, p. 19; Guba 1990, p. 18), has to be answered. This question aims at uncovering the degree of externality with respect to reality. It asks whether there is a definite, unchangeable, ‘external’ reality that simply has to be discovered or whether reality is a product of the ‘internal’ consciousness of the human mind. Applied to the Antarctic tourism context, the ontological question enquires about the nature of the Antarctic tourism phenomenon. Is Antarctic tourism driven by specific laws that can be studied and assessed in a factual manner, or is it a phenomenon co-created by its protagonists and the researcher?

The epistemological question asks about the relationship between the inquirer (knower) and the known (or the knowable) (Zahra & Ryan 2005, p. 4; Denzin & Lincoln 2000, p. 19; Guba 1990, p. 18). Can knowledge be accreted through rigorous and verifiable investigations, or is knowledge essentially subjective and based on personal experience? In the realm of Antarctic tourism regulation, the epistemological question addresses the form that knowledge possesses. It asks whether knowledge can be seen as the merely functional and technical understanding of regulatory mechanisms or whether it goes beyond written regulation into the domain of personal perspectives, interpretations and the ‘making’ of regulation. Is there ‘true’ and ‘false’ knowledge or is knowledge a fluid sphere of a constructed and experienced system of actions and reactions?

Finally, the methodological question asks how knowledge can be gained (Denzin & Lincoln 2000, p. 19; Guba 1990, p. 18). In the Antarctic tourism context, the methodological question enquires whether knowledge about the effectiveness of Antarctic tourism regulation can be gained by systematically studying the various regulatory tools that have been implemented in order to verify or falsify a set of pre-stated hypotheses. Or, alternatively, does the researcher have to assume the position of an interested and involved inquirer who cooperates with the stakeholders in order to uncover a rich array of viewpoints that shape and ‘make’ Antarctic tourism regulation?

Confronted with the conundrum of solving the paradigmatic dilemma, the author refrained from forcing herself and the thesis research into a specific paradigm and instead decided to let time act in her favour. Another reason for this restraint regarding the paradigmatic positioning of the research was the initial bedazzlement the researcher faced in the quest to immediately answer the ontological, epistemological and methodological questions (see Table 2.1.2) at the outset of the research project.

Ideally, as the literature suggests (Zahra 2006; Zahra & Ryan 2005; Hollinshead 2004a & 2004b; Phillimore & Goodson 2004), researchers should possess a good understanding of their own and their project’s paradigmatic position before they launch into the research process, particularly because paradigmatic decisions precede the

choice of methods. This, however, appears to be an enormous obstacle for a researcher who has not embarked on prior research in the specific area of interest. Is it actually wise to select an inquiry paradigm for a novel research topic in – for the researcher in question – a new research field? In fact, might it not encumber a reflexive and reflective research process to have to conduct the research within the descript boundaries of a paradigm chosen before the research context and environment can be experienced? In view of these doubts, the researcher decided to revisit ontological, epistemological and methodological questions in an ongoing fashion throughout the research process and to keep an open mind towards paradigmatic adaptations arising from the encounters with stakeholders, external influences and internal stimuli.

Initially, the researcher approached the project from a mainly postpositivist stance with a critical-realist ontology. Such an approach implied the belief that there was a *reality* 'out there' – albeit complex and never completely apprehendable –, and that the essence of Antarctic tourism regulation and its effectiveness could be captured by researchers spending enough time and effort to carefully analyse the respective phenomena. However, already at this stage, doubt was cast on the postpositivist assumption of a modified objectivist epistemology, which aims at achieving objectivity whilst acknowledging a certain impact of the researcher on the results (see Table 2.1.1). Qualitative methods were chosen, not the least because of their potential to overcome the – as they appear to the researcher – futile attempts to maintain objectivity in the social sphere, which is laden with subjective values and beliefs.

Upon embarking on the research itself, the researcher soon realised that the field of Antarctic tourism was filled with powerful and highly emotional perceptions of Antarctic tourism realities and equally strong convictions of how Antarctic tourism should be conducted and regulated. Confronted with a diversity of opinions and a value-laden research environment, the conviction crystallised that a postpositivist inquiry paradigm alone would inhibit the collection of authentic and rich data that could be too complex to verify or falsify pre-set hypotheses. Consequently, revisiting the paradigm question at this stage swung the pendulum towards the other end of the spectrum – the constructivist paradigm. An interpretive and dialectic approach with the ambition of reconstructing the multi-layered realities of the Antarctic tourism field as authentically and reliably as possible suited the researcher, who at this point had become more of a passionate participant – as much by conviction as by necessity. The latter was the case due to the curiosity in the research project expressed by the stakeholders, who interviewed the researcher as much as the researcher interviewed them, and the participation and involvement the stakeholders expected the researcher to exhibit before they would agree to participate in the study. Still, the researcher was and is not ready to unequivocally adopt a constructivist ontology. Whilst acknowledging the existence of multiple and relativist constructs of reality, the researcher rejects the notion that a single physical 'real' world is inexistent.

Later on during the research process, the researcher increasingly questioned her motivation to conduct this particular research project. Was it not to inform, and most importantly influence, future decision-making processes with respect to Antarctic tourism regulation? Would this motivation, in turn, not automatically entail the desire to transform either the perceptions surrounding Antarctic tourism regulation or the policy-making thereof? Would the research then not draw on critical theory? A subjectivist epistemology certainly suited the researcher and the complex and emotional research setting very well. Similarly, the notion of socio-economic, cultural, political and ethnic influences that shape

reality over time appealed to the researcher. Nonetheless, the researcher could not and cannot see herself applying a dialogic methodology with the aim of transforming the perspectives of Antarctic tourism stakeholders. It seems that capturing the richness of opinions and experiences in order to create a reasonably authentic picture of the various interpretations of Antarctic tourism regulation is better suited to evaluate the effectiveness of the regulatory regime. More importantly, the researcher soon realised that given the strength of the convictions and beliefs held by the stakeholders, such attempts to transform stakeholder opinions during the research process would not only be futile, but also counterproductive.

During the data analysis and writing-up, the paradigmatic questions were pondered again. The researcher once again faced a paradigmatic dilemma – although seeing more clearly now the research project, her own value system and beliefs regarding the research topic, and the paradigmatic underpinnings of the involved stakeholder groups, it still proved to be impossible to espouse the principles of one, and only one, inquiry paradigm. The answers to the ontological, epistemological and methodological questions possess a dynamic nature and have changed and evolved in the duration of the research project, finally taking the shape of the answers provided in Table 2.1.2.

Table 2.1.2: Summary of the ontological, epistemological and methodological questions and answers

	Ontology	Epistemology	Methodology
Questions	Is there a definite, unchangeable, 'external' reality or is reality a product of the 'internal' consciousness of the human mind?	What is the nature of knowledge itself, and how can knowledge be accumulated? Who holds the knowledge?	How can the researcher find out about the reality or realities that are out there and shape the phenomena to be investigated?
Answers	There is a physical reality out there, which, however, is reconstructed through individual interpretations and perceptions. The latter are influenced by sociological processes and cultural background.	Knowledge is essentially subjectivist, value-laden and held by individual stakeholders. Knowledge goes beyond written codices and extends into the sphere of personal experiences. It can be accumulated by a researcher through interaction with the researched.	Inquiry is driven by qualitative interaction with the researched to uncover the range of perspectives, opinions and reflections held by the researched. The constructs of realities gained through inquiry are then examined for commonalities and major differences.

It became clear that the researcher's positions could not easily be forced into one of the four main inquiry paradigms. Instead, the researcher sees herself confronted with a multi-faceted selection of paradigmatic options, which are not necessarily free of conflict and contradiction. The only logical choice lies within the adoption of a multi-paradigmatic approach, a choice that is further substantiated and justified in the following section.

2.2 Suitability of a multi-paradigmatic research approach

Whether they come from pre-existing theory or from previous experience, all researchers have preconceptions that shape what they see when conducting research. (Ezzy 2002, p. 11)

The previous section highlighted the researcher's paradigmatic journey, which, some may claim, yielded the unsatisfactory outcome of indecisiveness regarding the inquiry paradigm, or, it may be argued, opened up a wealth of possibilities with respect to benefiting from the advantages of endorsing multiple paradigms. After initially battling with

the consequences of approaching the research from a multi-paradigmatic perspective, the researcher soon recognised the potential inherent in this approach – the potential of considering the phenomenon from a variety of angles in a paradigmatically largely unrestrained fashion. Qualitative research has been regarded as possessing the potential to influence policy-making (Rist 2000, p. 1002), which in and of itself is “multi-dimensional and multi-faceted” (Rist 2000, p. 1015). Once again, the approach of attempting to influence policy-making indicates a leniency towards a critical theory paradigm. However, for the reasons mentioned in the previous section, this paradigm is not dominating the thesis research, and a multi-paradigmatic approach is favoured.

The author acknowledges the groundbreaking essay by Thomas Kuhn (1970) discussing how paradigms are established and how they guide and inform scientific inquiry. Kuhn (1970) examines paradigm shifts, which are preceded by changes and newly emerging theories in a discipline culminating in a paradigmatic crisis, which eventually leads to the development of a new paradigm. According to Kuhn (1970), paradigm shifts, which represent an ongoing scientific revolution, ultimately mark transitions between old and new theories and approaches to *normal science* (Kuhn 1970, p. 6). Hence, Kuhn (1970) appears to exclude a multi-paradigmatic approach *per se* as it involves the simultaneous adoption of more than one paradigm. Whereas Kuhn’s (1970) revolutionary attempt to explain the changing nature of the philosophy of science and his relativist approach to scientific theory are acknowledged, this thesis surpasses Kuhn’s (1970) mono-paradigmatic approach reflecting the change that the social sciences are currently undergoing as the boundaries between paradigms become increasingly blurred (Denzin & Lincoln 2000).

Zahra’s (2006) recent application of a multi-paradigmatic framework to tourism research focusing on New Zealand’s Regional Tourist Organisations paves the way for choosing a multi-paradigmatic approach for the research project presented here. Zahra (2006, p.15) states,

All paradigms can make a contribution to tourism research, yet at the same time each impose limitations. A multi-paradigmatic approach is preferable to a single paradigm because of the complexity of the phenomena being investigated.

This statement shows that there is advocacy in tourism research to apply a multi-paradigmatic approach in order to do justice to the complexity of tourism phenomena under investigation. As an overview of the various human activities in Antarctica, their interdependencies and the complex network of stakeholders and interests in the previous Chapter shows, neither Antarctic tourism nor this thesis research functions in a vacuum. A multitude of socio-economic, cultural and, very importantly, political issues influence and inform the research and shape the approach taken to respond to the aforementioned research question. It is argued that, lacking a distinctive system of purely tourism-related concepts, tourism research eludes categorisation under one specific discipline – not to mention representing a discipline in its own right (Tribe 2004). On the contrary, tourism research is influenced by a number of disciplines and paradigms and, in order to derive meaningful conclusions on a particular subject, it needs to be flexible enough to incorporate concepts and findings from a range of different disciplines.

Similarly, this thesis research, which puts tourism to the Antarctic into a policy context, relies on inferences from law and policy for ATS legal considerations and regime theory, and from history, geography, and psychology for environmental, social and situational context. Underlying the practice of Antarctic tourism and the research project itself

are business ethics and communication. As will be shown in the following Chapters, open and effective communication is essential in the Antarctic tourism sector – for safety reasons in a hostile environment and for self-regulatory purposes – and business ethics are said to be the driving force behind decision-making processes within IAATO. In the same vein, the research hinges on cooperation by, and communication with, Antarctic tourism stakeholders. Ethical considerations⁸ play an important role for building a trustworthy relationship with the stakeholders and, most importantly, for guiding the researcher in the process of the interviews, the Delphi study and the analysis and write-up of the results.

Figure 2.2.1 illustrates how the overarching topic of this study is nestled among a range of different dimensions and disciplines, each of which is attributable to the research topic, and one or several actors involved in organising, regulating or monitoring Antarctic tourism. Overlying the phenomena and disciplines that are of relevance to Antarctic tourism (research) are three main dimensions influencing stakeholder and researcher positions and opinions. As the following Chapter illustrates, personal opinions, ethical dispositions and environmental conscientiousness of stakeholders are of great importance in the Antarctic tourism context. Often, they drive decision-making of *regulators*, positioning of *monitors* and Antarctic tourism practice by operators. On top of the ethical and personal dimension, political decisions and political positions determine the boundaries within which *organisers* can operate and upon which Antarctic tourism regulation is built.

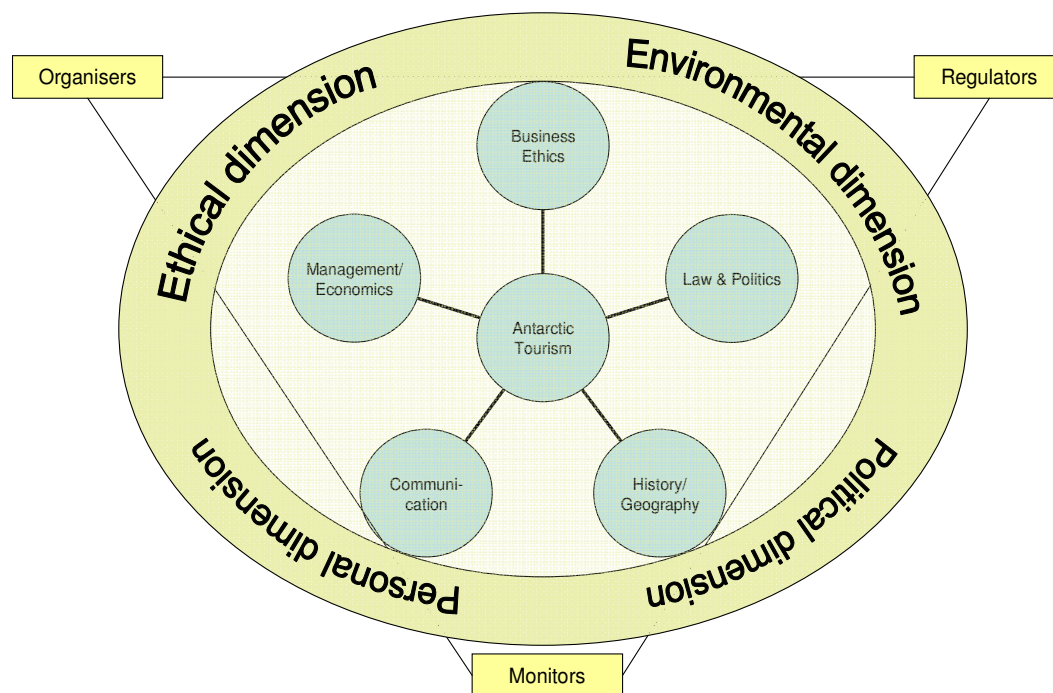


Figure 2.2.1: Multiple dimensions, multiple phenomena, multiple disciplines

⁸ Hooker (1992) characterises ethics as “theories of obligation or responsibility or rightness” (Hooker 1992, p. 156) and applied ethics as “combinations of ethical principles with other principles, e.g. economic, legal or political principles, and with factual information, to develop practical principles for some specific situation or kind of situations” (Hooker 1992, p. 157). Environmental ethics can be defined as the set of principles that govern human–nature relationships. Environmental ethics assume that people’s behaviour towards the natural environment can be influenced by moral norms (Des Jardins 1997, p. 9).

The three main categories of Antarctic tourism stakeholders identified in Figure 2.2.1 cannot be associated with a single paradigm, but rather are informed by various different paradigms. The category of Antarctic policy-makers (*regulators*) covers government agencies and their representatives directly involved either in designing, voting on or implementing and policing Antarctic tourism regulation in the international or national context. As such, *regulators* encompass primarily representatives of ATCPs who are likely to be influenced by critical theory. *Monitors* commonly assume the role of watchdogs as they have an interest and a position on Antarctic tourism practice and regulation, they follow the development of the practice and regulation from an academic, environmental or conservational standpoint and they (attempt to) influence policy-makers or public opinion on Antarctic tourism. *Monitors* might identify with anything from positivism/post-positivism (for instance, in the case of scientists evaluating the physical impact of tourism) and critical theory (for instance, in the case of environmental NGOs subscribing to a certain ideology) to constructivism (for instance, in the case of reflexive, interpretive individual observers). Tour operators, their primary expedition staff, their industry association and the official representatives of their self-regulatory body (*organisers*) appear to elude any paradigmatic categorisation *per se* as they comprise a wide range of different actors with diverging motivations.

The previous sections have illustrated the difficulty of capturing the essence of the research project, research context and the researcher's belief system within a single paradigm. Paradigmatic decisions are further complicated by the ontologically and epistemologically diverse network of Antarctic tourism stakeholders. For these reasons, the researcher sees herself confirmed in her selection of a multi-paradigmatic approach for this research project, which reflects the multi-dimensionality, multi-disciplinarity and conceptual ambiguity that is often associated with tourism research (Tribe 2004). The exposure of this study to differing paradigmatic views, not only in terms of multiple disciplines and phenomena but also with regard to the great variety of stakeholders, supports the decision to employ a multi-paradigmatic approach. The latter represents a pragmatic approach capable of effectively capturing the manifold dimensions of Antarctic tourism regulation and of promoting the development of discussions about Antarctic tourism regulation that are based on multi-layered realities and that consequently have more relevance for practice. The pragmatism of a multi-paradigmatic approach has been elaborately discussed by Zahra (2006) and Zahra & Ryan (2005), who argue that such an approach would allow the researcher to focus on the phenomena rather than on one paradigm (Zahra 2006; Zahra & Ryan 2005). They continue by emphasising that a multi-paradigmatic approach has been mainly employed by researchers under the following four circumstances:

- when more than one dimension of a phenomenon was to be explored;
- when complex issues were to be explored;
- in pursuit of theories and evidence grounded in reality; and
- when a comprehensive explanation that was relevant to practice and reality was sought (Zahra 2006; Zahra & Ryan 2005).

The complexity of the regulatory regime for Antarctica, the multiple realities and perspectives with respect to Antarctic tourism, and the timeliness of Antarctic tourism research with practical relevance all warrant a wider approach than a mono-paradigmatic one could possibly provide.

2.3 The research process, sample groups and ethical issues

[A]ll research is interpretive, and we face a multiplicity of methods that are suitable for different kinds of understandings. So the traditional means of coming to grips with one's identity as a researcher by aligning oneself with a particular set of methods (or by being defined in one's department as a student of "qualitative" or "quantitative" methods) is no longer very useful. If we are to go forward, we need to get rid of that distinction. (Schwandt 2000, p. 210)

A multi-paradigmatic approach has the distinctive advantage of allowing as well as justifying the use of a wide range of inquiry methods. As argued in the previous section, the researcher is more at ease with a critical theory ontology, a subjectivist epistemology and a constructivist methodology (please see Table 2.1.1 for clarification of the inquiry paradigms), which limits the variety of adequate inquiry methods to interactive qualitative methods. Despite this limitation, the researcher still faced a wealth of qualitative methods that needed to be carefully assessed for their suitability to answer the research questions, which yet again were not cast in stone.

Janesick (2000, p. 384) claims that qualitative researchers are and need to be open-minded, but do not go into the research process without any prior knowledge, which refutes any *tabula rasa* research approach that was suggested in the past (Ezzy 2002). The latter rather reflects Glaser's (1978) approach, as he maintains that "the first step in gaining theoretical sensitivity is to enter the research setting with as few predetermined ideas as possible" (Glaser 1978, p. 3). Kelle (2005) supports this approach of naivety in qualitative research when entering the research arena, which is meant to aide the process of inductive theory formulation. However, as Ezzy (2002) and Pidgeon & Henwood (2004) outline, it must not be forgotten that theory guides data collection and analysis. Consequently, Ezzy (2002) and Pidgeon & Henwood (2004) argue that it is impossible to enter the research process without any preconceptions and that rather than denying the existence of pre-existing conceptions, the researcher should admit and state them forthrightly.

Philosophically speaking, theory cannot simply 'emerge' from data, because interpretations and analysis are always conducted within some pre-existing conceptual framework brought to the task by the analyst. (Pidgeon & Henwood 2004, p. 627–628)

In the same vein, a preliminary literature review and analysis of ATS documents was used to discover areas within Antarctic tourism research that were of relevance to policy-makers. Furthermore, gaps in research – as outlined in Chapter 1 – were identified, which helped the direction of this project to crystallise and goals and questions to be drafted. The latter were frequently revisited and refined, based on discussions with Antarctic tourism experts.

The research questions and goals as well as the paradigmatic journey the researcher undertook determined and shaped the methods of inquiry. As previously stated, interactive qualitative methods were singled out as suitable methods from the outset of this project. However, before launching into a deeper analysis of the main inquiry methods applied, the research procedure has to be clarified. Qualitative researchers need to ensure that the research process is clearly laid out for the reader to follow, understand and judge the rigour of the research approach (Holliday 2002).

Aside from informing the formulation of preliminary research questions and goals, the initial literature review also supported the classification of major Antarctic tourism stakeholders based on their contributions and primary activities within the Antarctic tourism field and their influence in related decision-making processes. Contacts with Antarctic tourism and policy researchers and with other Antarctic tourism stakeholders that were subsequently established were used to gain some insight into the research context. The purpose of these first contacts was twofold: firstly, to develop inquiry strategies for the research projects and, secondly to establish a working relationship with Antarctic tourism stakeholders.

Upon experiencing some aspects of the research environment and context, it became clear that Antarctic tourism phenomena were situated within a very dynamic, emotional, and interactive sphere, which was dominated by personal experiences, inter- and intra-group communication and unequal power relationships. Tribe (2004, p. 56) argues that interpretive methods can aide the understanding and analysis of meaning in a world of unequal perspectives and can integrate the 'reality' of the researched. When talking about interpretive methods, Tribe (2004) seems to apply the same categorisation as Goodson & Phillimore (2004), who effectively adopt Guba's (1990) constructivist paradigm as their interpretive paradigm. This again would imply that a hermeneutic approach, which interprets Antarctic tourism phenomena by analysing the meanings that Antarctic tourism stakeholders attach to these phenomena, is called for.

The first goal of this research project, to assess the effectiveness of the current regulatory regime from the perspectives of Antarctic tourism stakeholders requires direct contact and dialogue with the stakeholders to capture the richness of perspectives and multi-layered realities apparent in the field of Antarctic tourism. This dialogue or conversation can be effectively channelled through interviews, which represent one interpretive inquiry method that suited this research project. The second goal of the research aims at examining options for the future regulation of Antarctic tourism under consideration of the constitution of the current regulatory regime and potential future developments in Antarctic tourism. This second research goal asks questions about the desirability and workability of alternative regulatory mechanisms. Hence, once again, the perspectives of Antarctic tourism stakeholders are required. This time, the questions are future-oriented, which necessitates the incorporation of well-researched and justified opinions of Antarctic tourism experts, who cannot only be found in the industry but also in academia, to focus and mediate analysis. A Delphi study – which can be designed in as qualitative a way as the researcher desires – provides an interpretive inquiry method that can facilitate a discussion amongst representatives of all Antarctic tourism stakeholder groups in pursuit of reaching the second goal of this research project.

Having identified her research objectives and main inquiry methods, the researcher could design and administer the interviews and the Delphi study. As portrayed in Figure 2.3.1, the research project is characterised by an emergent and continually developing process based on an interwoven, interdependent network of research activities. Feedback loops between different research activities illustrate direct interdependencies. In addition, all activities from April 2005 onwards linked back to and informed the literature review, which was iteratively employed to refine the focus of the other research activities and to explore further aspects of the phenomena.

Timeline		Feedback	Research activities	Output	Data collected	How collected?
2005	Jan		Literature review	Identification of major issues;	Articles	photocopies and
	Feb		Document analysis	Research questions;	Documents	electronic copies
	Mar		Establishing contacts	Refinement of questions;	Accounts	emails
	Apr					
	May		Pilot-testing interviews	Development of a general	Accounts	transcription
	Jun					
	Jul		Interviews	Analysed transcripts;	Accounts	verbatim transcripts
	Aug					
	Sep					
	Oct					
	Nov					
	Dec					
2006	Jan		Pilot-testing Delphi study	Development of a thorough	Accounts	electronic questionnaires;
	Feb					
	Mar		Delphi study	Analysed questionnaires;	Accounts	notes on conversations
	Apr					
	May		Final analysis & write-up	Thesis chapters; papers	Accounts	discussions with
	Jun					
	Jul					
	Aug					
	Sep					
	Oct					
2007	Nov		Participant observation	Validation and clarification of	Description of operations	observations and
	Dec					
	Jan		Final write-up	Thesis		photographs
	Feb					
	Mar		Final write-up	Thesis		
	Apr					
	May					
	Jun					
	Jul					
	Aug					
2008	Sep					
	Oct					
	Nov					
	Dec					
	Jan					
	Feb					
	Mar					
	Apr					
	May					
	Jun					
	Jul					
	Aug					

Figure 2.3.1: Catalogue of research activities and collected data

As became apparent in the previous sections, this research project embraces a multi-paradigmatic approach and attempts to capture rich and authentic data reflecting the perspectives of Antarctic tourism stakeholders with regard to the regulatory regime. Producing an authentic and rich account of the diverse, multi-layered realities within the Antarctic tourism sector assumes an open-minded qualitative approach. Such an approach is typically characterised by reflectivity and reflexivity on the side of the researcher with respect to the methods of inquiry, the data collected, the research context and conclusions drawn (Hollinshead 2004b; Janesick 2000; Silverman 2000). Despite a preliminary literature review and the rejection of a *tabula rasa* approach, the researcher paid attention to stay close to and maintain the authenticity of the data, in order to develop an argument based on the data. This approach reflects an inductive qualitative methodology that acknowledges the spatial, situational, temporal and subjective particularities of knowledge.

2.3.1 Sample groups

In order to collect rich and authentic data to evaluate the effectiveness of Antarctic tourism regulation from the perspectives of Antarctic tourism stakeholders, the views and experiences of representatives of each of the main stakeholder groups have to be considered. Antarctic tourism stakeholders form the backbone of this research as they not only influence and determine the course Antarctic tourism regulation takes, but also interpret, work with and “make” Antarctic tourism regulation (happen). How they interpret, and work with (or against) Antarctic tourism regulation defines the effectiveness of the regulatory regime. To evaluate the effectiveness of this regime, one has to find answers to the questions of how Antarctic tourism stakeholders construe and implement regulation. This, as argued in the previous section, can be best achieved through utilising an inductive, qualitative methodology.

Relying on interviews and a Delphi study as the primary methods for collecting information makes it necessary to draw on a wide range of expertise and experience from reliable and accessible sources. This leads back to the epistemological question on where and how knowledge can be accumulated. From the beginning of the project, the researcher envisaged a subjectivist epistemology with knowledge being co-created by the inquirer and the researched. The researcher was also aware that, to a large extent, practical Antarctic tourism knowledge was held in the Antarctic tourism industry, among researchers and *monitors*. Further, a thorough understanding of Antarctic tourism regulatory mechanisms and insight into regulatory processes could be gained through the *regulators*.

For the above reasons, it seemed sensible to select study participants according to their affiliation with each of the three main stakeholder categories (*monitors*, *organisers*, *regulators*), which were introduced earlier in this Chapter. The *organisers* can provide perspectives on how sensible, practical and feasible they perceive regulation to be and how diligently they implement Antarctic tourism regulation. The *monitors* symbolise the ‘little voice of conscience’ within the Antarctic tourism arena and open up the discussion to capture the informed perceptions of critical observers and conservationists, who have dedicated time and effort towards investigating Antarctic tourism phenomena. The *regulators* create the regulatory framework for Antarctic tourism, which represents the foundation of analysis. From the *regulators*, the researcher can obtain data and insights related to the policy-making process and the atmosphere among ATCPs with regard to current and desired levels of Antarctic tourism regulation.

After first access had been gained to a few Antarctic tourism stakeholders, further study participants were identified using a snowball sampling method. According to Ryan (1995, p. 103), snowball sampling is a suitable purposeful, non-random sampling method in the context of qualitative research, where the researcher interacts with the researched. Every research participant suggested other potential participants that could be approached, and using these recommendations and connections between Antarctic tourism stakeholders enhanced trust-building within the community and improved access to stakeholders.

Holliday (2002, p. 9) argues that

There are two sides to qualitative research. To meet the exigencies of the social situation being studied, freedom is needed to explore creatively the best way to approach the scenario. ... On the other hand, the researcher must be prepared to account carefully for every move made. These two sides represent the judicious balance between taking *the opportunity* to encounter the research setting while *maintaining the principles* of social science. (emphasis in original text)

The judicious balance between this convenient exploration of access and the maintenance of the principles of social science needed to be maintained throughout this research project. A certain opportunistic exploration of the research setting cannot be denied as the researcher approached Antarctic tourism stakeholders whenever the opportunity arose and tried to 'enlist' additional study participants. The research environment was highly dynamic and politically sensitised. Therefore, the researcher realised that she could not afford to forego the opportunity to access available participants in favour of following a prescribed scheme of pre-planned and deterministic sampling, which might have resulted in her encountering closed doors.

Qualitative research is often criticised because findings are based on a small and non-representative sample as well as on purposeful, non-random sampling procedures (Decrop 2004, p. 159). Therefore, trustworthiness, which can be achieved through the triangulation of, for instance, data, methods, investigators or theory, is regarded as an important criterion for qualitative research (Decrop 2004). It is not claimed here that the small sample group this project builds on is representative of the whole Antarctic tourism community. Building a case for representative sample sizes alone would position the research in a positivist or postpositivist paradigm, both of which the researcher was not at ease with. Because of a subjectivist epistemology and a critical realist ontology that leans towards a modified relativist constructivism, a 'representative sample' could only be talked of if all Antarctic tourism stakeholders were included. To achieve such comprehensiveness is, needless to say, virtually impossible for any research project.

Instead, what this project aims at achieving is richness and authenticity of the data collected. Richness can be achieved by including research participants belonging to the main three stakeholder groups, which is the case for this project. Authenticity is a matter of method and how the results are reported. As Silverman (2000, pp. 822–823) writes,

[T]he open-ended interview apparently offers the opportunity for an authentic gaze into the soul of another, or even for a politically correct dialogue in which researcher and researched offer mutual understanding and support.

This 'authentic gaze' has been the guiding principle for the researcher, who also tried to reflect diligently the perspectives of the research participants. Details on how she tried to achieve that, however, are discussed in the interviews and Delphi study sections on pages 32–34 and 41, respectively.

2.3.2 Ethical issues

This research project was approved by the Human Ethics Committee at the University of Canterbury¹⁰ and was dedicated to protecting the identities of the participants as well as to handling the data in a professional and confidential manner. All study participants were informed about the research procedures, the use of the data and confidentiality issues (see Appendix 1). Moreover, all participants were explicitly asked for their consent to partake in the study and were given the opportunity to review their contribution and withdraw at any time (see Appendix 2). The verbatim transcripts of the interviews and the results of the Delphi study were made available to the participants for approval and for the validation of the conclusions drawn from the collected data. In order to ensure confidentiality, a blanket of anonymity was applied to the entire research project, complying with the Human Ethics regulations and ensuring that participants could disclose information safely and confidently. As neither the names nor the affiliation of the study participants can be disclosed, an alphanumerical code was assigned to each of the participants in order to distinguish between the sources of the data. The following broad categorization and coding scheme was applied:

- *Monitors*: representatives of various environmental NGOs [M1–M4] and Antarctic tourism researchers [MS1–MS10],
- *Organisers*: Antarctic tour operators and representatives of the executive committee [O1–O16],
- *Regulators*: representatives of ATCP government authorities who are directly involved in Antarctic policy [R1–R11].

This alphanumerical classification scheme is used throughout the thesis. The following sections provide greater detail with respect to the distribution of representatives of each category in the interviews and Delphi study.

2.4 Interviews: process and analysis

The spoken or written word has always a residue of ambiguity, no matter how carefully we word the questions and how carefully we report or code the answers. (Fontana & Frey 2000, p. 645)

Altogether 18 interviews (three with *monitors*, twelve with *organisers*, and three with *regulators*) were conducted between January 2006 and March 2007. A general strategy for the interviews along with a broad topical guide was developed following in-depth discussions and pilot interviews with other tourism researchers, scientists working on Antarctica-related topics and outsiders not involved in Antarctic research.

As outlined before, potential interviewees were identified based on an initial literature review and subsequently through recommendations and references by other Antarctic tourism stakeholders and study participants. The actual selection process was determined by the opportunity of access to the interviewees and by selection criteria, which aimed at reflecting a wide range of perspectives from representatives of the three main Antarctic tourism stakeholder groups. The interviews were designed to capture the present configuration and practice of Antarctic tourism. For this reason, the interviews focused mainly on tourism *organisers* who were the ones putting their ethos with regard to Antarctic tourism into practice. Table 2.4.1 gives an overview of the interviewees, their affiliation and position as well as a coding, which is used throughout the thesis to distinguish between the sources of the data presented.

¹⁰ Approval for the project from the Human Ethics Committee was received on 28 September 2005 (see reference number: HEC 2005/89).

Table 2.4.1: Categorisation and coding of the interviewees and their affiliation

Coding	Category	Affiliation	Position
O1	Organiser	Ship-based with landings (< 200 passengers)	President
O2	Organiser	Ship-based with landings (< 200 passengers) & land-borne	Co-Owner and EL*
O3	Organiser	Ship-based with landings (< 200 passengers)	Co-Owner and EL*
O4	Organiser	Ship-based with landings (< 200 passengers)	VP** Sales & Marketing
O5	Organiser	Ship-based with landings (200–500 passengers)	EL and lecturer/scientist
O6	Organiser	Ship-based with landings (< 200 passengers)	EL and lecturer/scientist
O7	Organiser	Executive committee	Upper-level representative
O8	Organiser	Ship-based with landings (< 200 passengers)	Co-Owner and EL*
O9	Organiser	Ship-based with landings (< 200 passengers)	Lecturer/scientist
O10	Organiser	Ship-based with landings (< 200 passengers)	Sales & Marketing; lecturer
O11	Organiser	Ship-based with landings (< 200 passengers)	EL* and lecturer/scientist
O12	Organiser	Ship-based with landings (> 500 passengers)	EL*
M1	Monitor	Environmental NGO	Former representative
M2	Monitor	Environmental NGO	Representative
M3	Monitor	Environmental NGO	Representative
R1	Regulator	ATCP government authority	Upper-level representative
R2	Regulator	ATCP government authority	Upper-level representative
R3	Regulator	ATCP government authority	Upper-level representative

Note: * EL = Expedition leader; **VP = Vice President

The apparent dominance of small-ship operators among the interviewees realistically reflects the configuration of the Antarctic tourism industry, which is currently largely composed of tourism *organisers* offering expedition-type cruises on vessels with a capacity of less than 200 passengers. Fifty-four percent of IAATO members are small-ship operators (IAATO 2007c).

The overall number of interviews was not predetermined but rather dependent on the data collected through the individual interviews. Once the point of stagnation had been reached, i.e. when new interviews provided hardly any fresh insights¹¹, the interviewing process was terminated. This point of saturation was reached after what seems to be a rather arbitrary number of 18 interviews.

2.4.1 Approach, reflections and bias

The interviews were approached with what Kvale (1996, p. 31) referred to as ‘deliberate naïveté’. In accordance with her preference for a subjective epistemology, her reluctance to depart from a modified critical-realist ontology and the acknowledgement that meaning is created through interpretive, cognitive processes, the researcher approached the interviews with the aim of maintaining the position of an interested, yet uninvolved outsider. The researcher professed procedural and conceptual knowledge about Antarctic tourism and the Antarctic governance regime, yet no practical experience. She emphasised her curiosity about the interviewees’ viewpoints and experiences and approached all standpoints represented by the participants with as open a mind as possible. Soon, the researcher had to realise that the curiosity she extended towards her interviewees was reciprocal, and despite her desire to maintain the position of an uninvolved outsider, the research participants drew her into a con-

¹¹ According to Pidgeon & Henwood (2004, p. 634) sampling and data collection should proceed until the point of saturation is reached, which implies a simultaneous collection and analysis of the data.

versation. Faced with the choice of either having to give up her stance as an uninvolved observer or forfeiting the chance to gain insights, the researcher chose the former. Reflecting on the interviews again during the write-up, the researcher realised that because of her necessary involvement, meaning was co-created in a conversation between the interviewee and the researcher. What implications does this have? Paradigmatically, it signifies a tilt towards the constructivist paradigm. Analytically, it needs to be acknowledged that the research was neither value-free nor unbiased.

In terms of bias, it has to be noted that the researcher's background in environmental science and development policy as well as her own deep appreciation of wilderness areas potentially influenced the interviewing process and the questions asked. It simply cannot be claimed that the data collected are totally neutral or free of bias, but research hardly ever is, and the qualitative researcher especially needs to acknowledge this fact (Janesick 2000). Each interview has to be regarded as 'negotiated text' (Fontana & Frey 2000, p. 663) between the investigator and the participant. Consequently, the interviews can be seen as the product of interpretive and response practised in a highly situational context. The characterisation of interviews as 'negotiated text' may well be considered a limitation, but in the context of qualitative research, it can be a strength in that it provides a unique opportunity to gain in-depth understanding of the individual beliefs and opinions of the participants. It is hoped that this study reflects a passion for communicating with the stakeholders and for the issue at hand in an attempt to represent the stakeholders' opinions and perspectives as authentically as possible.

2.4.2 Procedural issues

The interviews followed a semi-structured pattern by using a broad topic guide derived from the literature review and first casual conversations with Antarctic tourism stakeholders in order to maintain a focus on the following four key themes:

- The current state and anticipated future development of Antarctic tourism
 - Dangers with respect to the development of tourism
 - Challenges for future Antarctic tourism regulation and management with respect to the anticipated future development of Antarctic tourism
- Antarctic tourism practice and ethos: perspectives on self-regulation
 - The characteristics and 'culture' of Antarctic tourism practice
 - The importance of environmental and business ethics for Antarctic tourism
 - Discrepancies between ethics and practice
- Perspectives on Antarctic tourism regulation
 - Current regulation of Antarctic tourism through the ATS and its importance
 - Antarctic tourism regulation and management through IAATO
- Internal and external cooperation
 - Cooperation among ATCPs
 - Cooperation among IAATO members
 - Cooperation between *organisers*, *regulators* and *monitors* of Antarctic tourism

Despite following this topic guide, the interview questions were open-ended and the interview design was highly flexible and allowed the participants to bring in issues of importance resulting in a free-flowing conversation. The interviews were generally conducted in public places, such as cafes, hotels, restaurants, or in a few cases in private offices or the apartments of the interviewees.¹² The length of the interviews was determined by their flow and the participants themselves, but generally lasted from 40 minutes to 1.5 hours. With the participant's consent, the interview was digitally recorded and transcribed verbatim. The transcript was then sent back to the participant for review and comments or corrections in order to ensure the correctness of the data. All of the interviewees were extremely supportive and either followed up with a few comments – generally aimed at clarifying points that were highlighted as unintelligible in the transcript or agreeing with the transcript. Most of the interviewees were surprised about the lack of syntactical and grammatical elegance (or even clarity) of their comments in the verbatim transcripts. Here, the interviewees were reassured that the spoken word rarely exhibits the same eloquence as written documents do and that the researcher could follow the interviewee and comprehend the argument unless otherwise indicated. Aside from having the chance to review the transcripts, regular email contact was maintained with many participants, who were updated about the progress made by the researcher. Similarly, many participants kept the researcher informed about recent developments in the Antarctic tourism sector. This continued interaction with the participants well after the interviews supported Warren's (2002, pp. 96–97) claim that in qualitative interviewing the relationship between researcher and researched does not abruptly end after conclusion of the interview.

2.4.3 Data analysis

All transcripts were analysed in their entirety. As pointed out before, data analysis was characterised by a primarily inductive approach with the main patterns and categories being both emergent and expected. First, the transcripts were segmented into naturally occurring, topical sections. In order to maintain the context, the segmentation into topical paragraphs was not chosen to be too fine (Pidgeon & Henwood 2004, p. 636). Then, these segments were categorised, with the categorisation being fine-tuned under an iterative process of comparing and contrasting sections between transcripts in order to identify similarities and differences. This iterative comparative process is based on a modified constructivist version of grounded theory. Grounded theory is acclaimed as an excellent tool for the analysis of qualitative interviews in the context of social and political processes (Charmaz 2002; Warren 2002) and as appealing to both the inductivist-empiricist and the phenomenological-constructivist researcher (Pidgeon & Henwood 2004, p. 627).

As hinted in the section detailing the research process, the researcher is not completely at ease with Glaser & Strauss's (1967) original interpretation of grounded theory which, although emphasising an inductive approach, positioned grounded theory within the positivist paradigm (Pidgeon & Henwood 2004). Pidgeon & Henwood (2002) advocate "a constructivist revision of grounded theory" (Pidgeon & Henwood 2004, p. 628), which maintains the rigour and systematic process of data analysis but opens the interpretation of data to embrace a more creative and dynamic approach. The flexible, non-dogmatic use of grounded theory characterises a move towards a hermeneutic and constructivist interpretive approach, which takes into account the complexities of the phenomena observed and acknowledges that knowledge is created through the interaction of researcher and researched (Pidgeon & Henwood 2004). The author followed this modified constructivist version of grounded theory as it suited her own

¹² As the interviews were conducted in public places, background noise was present. However, as a digital tape recorder was used, the background noise could relatively easily be filtered out or at least minimised such that the taped conversations were audible.

methodological preferences and enabled her firstly to retain the richness, complexity, authenticity and relativity of the data collected, and secondly to allow the creation of meaning that reflects the multi-layered realities and perspectives of Antarctic tourism stakeholders.

The researcher aimed at maintaining a close relationship between data collection and analysis. This helps identifying the point of saturation (Pidgeon & Henwood 2004, p. 630) and has the research benefit from the power of authentic representation of phenomena that a grounded theory approach brings along if the researcher stays close to the data during analysis and representation (Charmaz 2002). Staying close to the data and reflecting on what was said in the interviews as accurately as possible enabled the exploration of the different perspectives on Antarctic tourism practice and regulation in a powerful way. However, existing theories and knowledge also influenced the process of categorisation in order to avoid *naïve empiricism* (Kelle 2005; Ezzy 2002). Throughout the entire iterative analytical process necessary modifications of the established key categories were made in order to accommodate issues that arose with transcripts reviewed later in the process.

Confronted with a vast amount of data in hundreds of transcribed pages from the various interviews, the researcher decided to tabularise a summary of the results from the analysed interviews in order to maintain a clear and categorised overview of the main themes emerging from the data collected. This table, a few select rows of which are shown in Appendix 3, details technical aspects of each interview, such as the date, place, setting, and coding, in the first five columns. The remaining columns contain the main arguments and, where appropriate, direct quotes on the main aforementioned themes and related subordinate topics. An additional column was added for the researcher's comments on the interviews and for interesting points mentioned by the interviewees that did not fit into any of the above themes or categories.

2.5 Delphi study: background, process and analysis

Knowledge is a double-edged sword. It can stimulate awareness of the complexity of natural systems and the limits of their resilience. Alternatively, it can leave us arrogant in our power and prerogative to alter and abuse them. (Thiele 2000, p. 548)

In the attempt to assess the effectiveness of the current Antarctic tourism regulation from stakeholder perspectives, one goal of this research project is to examine options for the future regulation of Antarctic tourism. As argued in the section on the research process, the discussion of future policy options needs to be based on the views and expertise of a wide range of Antarctic stakeholders, including other researchers who study the Antarctic tourism phenomenon intensively. A Delphi study is regarded as the method of choice in pursuit of the aforementioned research aim. The following paragraphs provide background information on the Delphi study, its application in the tourism context, and particulars on the Antarctic tourism Delphi employed by this thesis research.

2.5.1 Background: Applications of the Delphi study

In an attempt to make the most of indirect, structured group interaction and improve the accuracy of predictions, the Delphi study was developed by Gordon, Helmer and Dalkey at the Rand Corporation in the 1950s (Woudenberg 1991, p. 132). Despite its wide range of applications and subtypes, the Delphi study can be regarded as

... a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem. (Linstone and Turoff 2002)

The key characteristics of the conventional Delphi study are the anonymity of the participants (panel members), the process of iteration, and the provision of feedback (Woudenberg 1991, p. 133). The Delphi study is generally initiated by sending out questionnaires including structured, semi-structured or rather unstructured questions to a panel of experts on a certain issue or topic (Mullen 2003, p. 38). The responses are then analysed, summarised and sent back in a compiled version to the panel members, who are invited to review and either strengthen and support or modify their initial statements in light of the comments provided by other participants. This process is repeated for a pre-set number of times or until certain criteria are fulfilled (Mullen 2003, p. 38). Traditionally, the Delphi study aimed at getting a reasonable consensus of opinion among the panel members (Dalkey & Helmer 1963, p. 458), but this feature has repeatedly been modified over time to suit the growing range of applications. One of these modifications, which is of specific importance for this research project is represented by the policy Delphi introduced by Turoff (1970).

A policy Delphi is a “method for the systematic solicitation and collation of informed judgments on a particular topic” (Turoff 1970, p. 149), whereby these informed judgements are based on the comments and responses of a committee of “advocates and referees” (Turoff 1970, p. 151). As such, a policy Delphi cannot be regarded as a tool for decision making, but rather as a scheme for the analysis and evaluation of certain policy issues (Turoff 2002). However, as ‘advocates’ for various interest groups are involved in the discussion, a policy Delphi can and should provide a variety of options and the underlying rationales regarding a policy decision (Turoff 2002)¹³. This procedure was meant to facilitate the formation of scenarios relevant for decision makers. As argued later in this section, Turoff’s (2002) policy Delphi represents an appropriate analytical tool for this research project, which assesses regulatory mechanisms in a highly sensitive, political environment where consensus on issues as complex and emotive as Antarctic tourism is unlikely.

2.5.2 Delphi in the tourism context

Whereas the Delphi study has been used in a wide variety of fields, and most notably in education, business and health care, (Gupta & Clarke 1996), it has yet to find widespread use in tourism research. Although Garrod & Fyall (2001, p. 688) argue that “the Delphi technique is well established as a tool of tourism research”, it seems that it is still in a juvenile stage within the tourism field. In their bibliographic study of applications of the Delphi study between 1975 and 1994, Gupta & Clarke (1996) identified only four primary application papers in the area of leisure and tourism. Since 1994, there have been a few additions to this catalogue with an increasing broadening of the range of tourism issues Delphi was applied to. Formerly, the Delphi study was predominantly directed towards forecasting tourism development (Kaynak *et al.* 1994; Yong *et al.* 1989; Lui 1988; Kaynak & Macaulay 1984; Seely *et al.* 1980). For instance, Yong *et al.* (1989) employed Delphi to forecast the development of the Singaporean tourism sector and analyse positive and negative trends with respect to their implications for policy-makers and tour operators.

¹³ Tapio (2002) expanded Turoff’s policy Delphi by integrating cluster analysis into the process, which categorised the responses according to core quantitative variables.

More recently, the Delphi study has been applied to different aspects of tourism research such as sustainability issues (Miller 2001), environmental impact (Kuo *et al.* 2005; Green *et al.* 1990), long-term management of heritage attractions (Garrod & Fyall 2001), the tourism industry's attitudes towards sustainable tourism (Kearsley *et al.* 1999) or the estimation of non-use values (Sinclair & Stabler 1997). Miller (2001) made use of the Delphi study to ascertain expert opinion on the nature of sustainability indicators for tourism and the role of the tourist in this context. Green *et al.* (1990) analysed the potential environmental impact of the redevelopment of an old mill complex in West Yorkshire as a tourist attraction with a three-stage Delphi survey. In this case, the authors aimed at obtaining reasonable consensus between the panel members about the nature and scale of impacts on the natural and man-made environment that this kind of tourism development would entail. Kuo *et al.* (2005) combined a Delphi survey with an environmental impact matrix in order to conduct a strategic environmental assessment of the Taiwanese tourism sector. Here, the Delphi study was utilised to develop appropriate sustainability indicators which the impact matrix system was consequently based on.

In the Antarctic tourism context, Bauer (2001) was the first to use the Delphi study with the aim of examining what kind of tourism might be most popular in Antarctica over the medium to long term under consideration of environmental impacts and possible barriers to tourism development. His final panel consisted of 35 Antarctic stakeholders from different affiliations – environmental organisations, government bodies, tour operators, academics and other “Antarctic experts and practitioners” (Bauer 2001, p. 184), although he did not clearly outline what kind of parameters distinguish this last group. The main topics covered by Bauer (2001) include the most common current and future forms of Antarctic tourism and their (potential) impacts. In order to capture the diversity of opinions on these topics, Bauer's (2001) questionnaire was of a qualitative nature consisting mainly of open-ended questions. The responses indeed yielded a wide range of viewpoints and a large amount of data, both of which may be attributable to the constitution of his panel of experts. Not bound by stringent Human Ethics and Confidentiality Provisions, Bauer (2001, p. 187) explicitly named and commented on each of the individual panel members, who all have sound Antarctic tourism expertise. The strong panel of experts Bauer (2001) employed were unquestionably of great benefit to the data collected and the interesting conclusions that could be derived, which encourages a repetition of a Delphi study in the Antarctic tourism context.

Bauer's (2001) application of the Delphi within the Antarctic tourism context represents a groundbreaking effort in that it sensitises academics in terms of the suitability and applicability of a Delphi study in Antarctic tourism research. As always, being the first in the field is a daring endeavour, but Bauer's work (2001) represents a powerful first step on ‘thin ice’. However, being the first in the field also implies increased difficulties and challenges of having no precedent. It is not surprising that Bauer's (2001) Delphi has a few shortcomings, which this research – benefiting from retrospective insight – can try to circumvent. These shortcomings consist mainly of minor problems in the design of the Delphi and shall briefly be listed in the following.

Aside from an accompanying letter and a brief biography of the author (Bauer 2001, p. 184), the panel members were provided with neither background information on the issues to be investigated nor definitions for key terminology such as ‘impact’ or ‘legitimate use’. Four out of the nine questions Bauer (2001, p. 185) asks in the first round of his study are composite questions consisting of two or three subordinate questions. Judging by Bauer's (2001, pp. 188–209) detailed list of responses, this resulted in questions being only partially answered by most of the participants. Finally, out of the 35 panel members only three

responded to the compiled results of the first round; but even these three stated that they “did not want to change ... [their] opinions” (Bauer 2001, pp. 185–186). Bauer’s (2001) explanation for their reluctance to engage in further discussion is the apparently firm beliefs of the Antarctic community about issues related to Antarctic tourism Bauer (2001). Generally, tourism Delphi’s rarely extend beyond three rounds (Green *et al.* 1990; Wheeler *et al.* 1990). In the Antarctic context, with much time being spent on meetings, policy issues and long-term planning, it may not be feasible to expect panel members to sacrifice a lot of time for their participation in a Delphi study.

Bauer’s (2001) application of the Delphi to the Antarctic tourism context represents a valuable addition to the range of tools available to researchers. The author hopes that this research project will make a further contribution to using Delphi in Antarctic tourism research by

- (a) focusing on different aspects of Antarctic tourism¹⁴, and
- (b) taking into consideration the few problems associated with Bauer’s (2001) Delphi study and designing questionnaires in such a way that these problems are avoided from the start¹⁵.

Aside from Bauer (2001), Hampson (2002) suggested employing Delphi with the aim of developing a framework for tourism in the context of sustainable development in the Ross Sea region. So far, these two studies were the only Delphi approaches in Antarctic tourism research known to the author.

2.5.3 Rationale: Why should Delphi be used?

In the previously discussed applications of the Delphi study to the tourism context, the researchers deliberately chose this approach because of the advantages over other methods they saw for the task at hand, namely the opportunity to draw on the expertise of informed participants engaging in an anonymous and thus psychologically uninhibited interaction focused on either reaching (quasi-)consensus or providing options and supportive evidence with respect to a certain topic.

Irrefutably, the Delphi study has its limitations and drawbacks, which are discussed in detail by Woudenberg (1991) and Gupta & Clarke (1996). Mainly, their criticism focuses on the unsuitability of the Delphi for quantitative evaluations (Sackman 1975) or limitations related to the robustness of the respective design of the Delphi or the configuration of the panel (Gupta & Clarke 1996). A thoughtful and thorough design of the study, a panel of informed ‘advocates’ representative of the existing stakeholder groups and the qualitative application of the Delphi study are important for its success.

A policy Delphi, which is inherently a qualitative examination of policy options, their consequences, feasibility and adequacy (Turoff 2002), and which emphasises the involvement of advocates or referees representing a range of viewpoints and interest groups, elegantly renders irrelevant the main point of criticism that Delphi studies are unsuitable for quantitative evaluations. An

¹⁴ Bauer’s (2001) Delphi study was very broad in its approach and looked at the currently dominant forms and impacts of Antarctic tourism as well as its potential future development and legitimacy. This current Delphi, on the other hand, focuses on the regulatory effectiveness of tourism regulation as well as the design and overall goals of tourism regulation, associated responsibilities and aspects of desirability and feasibility with regard to certain regulatory mechanisms.

¹⁵ Topical background information, including the definitions of key terms, was provided in order to prevent confusion and conflicting interpretations of questions. Composite questions were avoided, and clarifying sentences were included with complicated questions. Finally, the study participants were encouraged to suggest additional questions, topics or the reformulation of specific questions.

appropriate study design and the selection of a panel consisting of representatives of all relevant interest groups form the foundation of a successful policy Delphi.

As the Delphi study, not to mention a policy Delphi, has yet to find its acknowledged place in the catalogue of methods conventionally used in tourism research, it was carefully weighed against other available options. An extended use of interviews, however, was largely prohibited by technical considerations such as the convenience of access to Antarctic tourism stakeholders scattered all over the globe and contextual issues such as the relatively small amount of time a respondent has to deliberate on a question before answering or the impossibility of reflecting on answers given after consideration of arguments provided by others. Focus groups, which could have achieved the latter, would not have offered an adequate level of anonymity aside from being impractical and logistically difficult due to the geographical dispersion of Antarctic tourism stakeholders. Participant observation was cost-prohibitive and would not have satisfactorily yielded future-oriented insights about an effective design of the Antarctic tourism regulatory regime.

Consequently, weighing the advantages of the Delphi study against its disadvantages and against other available methods, it remained the method of choice for an examination of future policy options, their implications and feasibility in the Antarctic tourism context. Given the rather rudimentary foundation provided by the current regulatory system, the hypothetical and exploratory nature of any assessment of alternative options require an open-mindedness and creativity which according to Gupta & Clarke (1996, pp. 186–187) are encouraged by Delphi and which suited the researcher's paradigmatic convictions.

Gupta & Clarke (1996) recommend employing Delphi in the presence of ethical and social dilemma or when there is a lack of historical data, both of which hold true for the Antarctic tourism context. The cooperative governance of an entire continent and all human activities within the specified area south of 60° S Lat. by an international treaty is without precedent. Due to the nature of the ATS, setting aside the continent for peace and science and the rapid growth of commercial tourism over the last few decades, ethical dilemmas over an appropriate use of Antarctic resources prevail. In the light of these issues, it appears to be advantageous to utilise a policy Delphi, which would also represent a relatively inexpensive technique to derive optimal benefits from the expertise Antarctic tour operators, academics, environmentalists and policy-makers have gained over years of work. Additionally, following up on Bauer's (2001) pioneering application of Delphi to the Antarctic tourism context, resulted in interesting conclusions on the general suitability as well as the main advantages and drawbacks of this technique within the Antarctic community. The previously discussed critique of Bauer's (2001) Antarctic tourism Delphi was used as a point of reference for pitfalls that could be circumnavigated and strengths that could be built on and accentuated.

2.5.4 Configuration of the panel

In order to representatively complement the data collected through the interviews, the Delphi study focuses on *monitors* and *regulators* with additional emphasis on Antarctic tourism researchers. As the latter have spent much thought, time and effort on analysing and understanding the particularities and development of Antarctic tourism, they are in an ideal position to comment on the success of current and potential future mechanisms for the regulation of Antarctic tourism. The inclusion of academics as panel members follows the example set by Garrod & Fyall's (2001) research on the management of long-term heritage sites. The *regulators* form another integral part of the Delphi study as they are likely to influence, if not determine, the further develop-

ment of any regulatory regime for Antarctic tourism. As decision-makers they have the information and background knowledge to discuss planned, ideal and realistic scenarios for the regulation of Antarctic tourism. In order to maintain the representation of all sample groups within the framework of the Delphi study, representatives of tour operators were included in the list of participants as well.

In accordance with Turoff's (2002) recommendations, there should be at least 10 but not more than 40 participants in order to keep the study to a manageable size. Initial contact with the study participants had been established from the outset of the research project and was followed up by email. 85 Antarctic tourism stakeholders out of all three categories (*monitors, organisers, regulators*) were electronically invited to participate in the Delphi study. Following this request to participate, 26 stakeholders submitted the completed questionnaire of the first round between 21 February and 26 April 2007.

Table 2.5.1 on Page 39 details the configuration of the panel and provides information on the individuals' affiliations and positions. In accordance with Human Ethics Regulations, the names of the Delphi study panel members are confidential and cannot be disclosed.

Table 2.5.1: Categorisation and coding of the participants in the Delphi study

Coding	Category	Affiliation	Position
M3	Monitor	Environmental NGO	Representative
M4	Monitor	Environmental NGO	Representative
MS1	Monitor	Research institution	Researcher
MS2	Monitor	Research institution	Researcher
MS3*	Monitor	Research institution	Researcher
MS4*	Monitor	Research institution	Researcher
MS5*	Monitor	Research institution	Researcher
MS6*	Monitor	Research institution	Researcher
MS7*	Monitor	Research institution	Researcher
MS8	Monitor	Research institution	Researcher
MS9	Monitor	Research institution	Researcher
MS10*	Monitor	Research institution	Researcher
R4	Regulator	ATCP government authority	Upper-level representative
R5	Regulator	ATCP government authority	Representative
R6*	Regulator	ATCP government authority	Upper-level representative
R7*	Regulator	ATS authority	Upper-level representative
R8*	Regulator	ATCP government authority	Upper-level representative
R9	Regulator	ATCP government authority	Representative
R10*	Regulator	ATCP government authority	Upper-level representative
R11*	Regulator	ATCP government authority	Upper-level representative
O2*	Organiser	Ship-based with landings (< 200 passengers)	Co-Owner and EL
O6*	Organiser	Ship-based with landings (< 200 passengers)	EL and lecturer/scientist
O13*	Organiser	Ship-based with landings (< 200 passengers)	Lecturer/scientist
O14	Organiser	Ship-based with landings (< 200 passengers)	EL and lecturer
O15	Organiser	Ship-based with landings (< 200 passengers)	Lecturer/scientist
O16	Organiser	Research institution	Lecturer/scientist

Note: * Panel members who participated in the second round as well as the first round

It can be seen that three participants of the Delphi study (M3, O2, and O6) had already been interviewed by the researcher. These three interviewees possessed a wealth of knowledge and experience with regard to Antarctic tourism operations and regulation and also expressed such an eagerness to support the researcher in further studies that they were invited to participate in the Delphi study. Aside from these three individuals, the panel was extended to include academics, *regulators* and *organisers* who had not been interviewed. As the Delphi study was conducted via the internet, many participants who could not be accessed for interviews were invited to participate.

2.5.5 Process and design of the Delphi study

The design and monitoring of the Delphi study was undertaken by the author, but validated by her supervisors in order to avoid the introduction of personal bias. Each questionnaire was independently pre-tested by Antarctic scientists and outsiders not involved in the thesis research¹⁶. The questionnaires were subsequently altered taking note of these reviewers' comments¹⁷. Aside from the questionnaires the participants of the study received an invitation letter (in the form of electronic mail) detailing the purpose and background of the Delphi study and emphasising that their participation was anonymous and confidential. The introductory email pointed out that this exercise would involve a group of Antarctic tourism stakeholders from a variety of backgrounds. In addition, brief descriptive information on the current regulatory regime for Antarctic tourism and available regulatory tools was provided. Adding this type of background information aimed at avoiding a situation where greatly varying interpretations of key terms and regulatory mechanisms adversely influenced the outcome of the Delphi study.

Primarily, the Delphi study focused on the following four cornerstones of present and potential future Antarctic tourism regulation:

- **What** are the overall goals of tourism regulation?
- **Who** should be responsible for the design, implementation and policing of regulatory instruments?
- **Where** are these regulations going to be of importance (i.e. site-specific regulation vs. general regulation)?
- **What** regulatory mechanisms are the most desirable and feasible?

To address these issues, the first round questionnaire consisted of seven parts (see Appendix 4 for the list of questions):

1. The strengths and weaknesses of the ATS and self-regulation.
2. The development of Antarctic tourism in terms of major concerns and hopes regarding Antarctic tourism realities in 25 years time.
3. Antarctic tourism regulation with respect to what the regulation should be aimed at, whose responsibility it should be and how it should be designed.

¹⁶ Among others, students enrolled for the Graduate Certificate in Antarctic Studies programme were asked to participate and provided valuable comments and suggestions. Likewise, other PhD students working on natural-science-based research projects tested the questionnaires.

¹⁷ For instance, some of the original questions were considered too complex or wordy by the reviewers and were consequently rephrased. Similarly, other questions, which were answered in an ambiguous way, were made more concise. Sometimes, explanatory sentences or examples were added to such questions.

4. Responsibilities for various aspects of Antarctic tourism regulation (design, voting, implementation, enforcement, monitoring and policing).
5. The success and effectiveness of the current regulatory regime.
6. Potential regulatory instruments and their effectiveness.
7. The desirability and feasibility of site-specific guidelines.

The initial questionnaire was based on findings from the interviews that had so far been conducted with Antarctic tourism stakeholders. In this sense, aside from providing data in their own right, the interviews served as an exploratory investigation into areas of concern and the initial positions of various groups on a range of Antarctic tourism issues. The interviews offered a good starting point for an interactive analysis of future and/or alternative policy options aimed at regulating Antarctic tourism.

As suggested by Turoff (1970; 2002), the following four voting dimensions were included in questions about the specific regulatory mechanisms and in questions regarding the evaluation of IAATO self-regulation and tourism regulation through the ATS:

1. Desirability (effectiveness or benefits),
2. Feasibility (practicality),
3. Importance (relevance),
4. Confidence (validity of argument or premise).

These voting dimensions were included to facilitate a more targeted discussion of issues in a policy Delphi and to allow conclusions to be drawn on the stance of the participants regarding certain opinions, positions or assumed “truths”. Especially the latter was of importance for the thesis as members of the Antarctic community and Antarctic tourism stakeholders hold strong convictions and beliefs. The comparability of these convictions was sought and achieved, although this component did not turn out to be an important element of analysis¹⁸.

The participants were also asked to identify questions that were unclear and should be rephrased and resubmitted in the second round as well as any points related to the current or potential future regulatory regime of Antarctic tourism that had been omitted. Whereas most of the participants commented that no rephrasing of questions was necessary, some participants suggested a few improvements. One participant commented that the voting dimensions used for some of the questions were confusing, and two participants stated that question 25 (a) and (b) was unclear. They suggested restating this question, which aimed at discussing the controversies surrounding self-interest as an incentive to preserve the Antarctic environment, as an open-ended question. Consequently, question 25 and other questions that included voting dimensions were rephrased and reintroduced in the second-round questionnaire as open-ended questions asking the participants to comment on the respective statements. Finally, the study participants were given the chance to make further comments that went beyond what was discussed in or ad-

¹⁸ In fact, the findings related to the voting dimensions were only of subordinate importance as the researcher realised that especially the open-ended questions provided the richest accounts and data. Here, it has to be noted that the members of the Antarctic community do not only seem to hold strong convictions and beliefs about issues pertaining to Antarctic tourism (as discussed in Chapter 6), but that they are equally prepared to elaborate and discuss these convictions in the framework of a Delphi study.

addressed by the questionnaire. A number of participants suggested other topical areas for inclusion in the second-round questionnaire¹⁹. At the discretion of the author, these comments were used to design the questionnaire for the second round.

Panel members were given elaborate feedback, including an executive summary of the first round's responses, which provided a 6-page overview of the synthesised and condensed answers for each of the overarching questions²⁰, and an elaborate 52-page comprehensive summary, which provided an exact account of all answers given in a categorised fashion²¹. Providing this feedback is an essential element of a Delphi study and allows to participants to gain an overview of the opinions and ideas of other panel members so that they may reposition their own replies (Garrod & Fyall 2001; Green *et al.* 1990).

The second-round questionnaire built on the first-round responses and included a revised version of the questions that participants had identified as unclear in the first-round questionnaire. With only ten questions, the second-round questionnaire (see Appendix 5) was substantially shorter than the first one. The reasons for a relatively short questionnaire were twofold. Firstly, the researcher realised that with the Arctic season and the 18th IAATO AGM approaching, Antarctic tourism stakeholders would be too busy to participate in lengthy studies. Secondly, the analysis of the first-round questionnaire showed a high level of internal consistency within each respondent's answers. In the section added by the researcher to the first-round questionnaire, where panel members could make general topical or procedural comments, many study participants reiterated certain points that were of importance to them. Moreover, the participants often provided elaborate answers on open-ended questions that characterise one of the strengths of a Delphi study in that they enable the panel members to explore the phenomena and discuss their perspectives in detail (Garrod & Fyall 2001).

The second round of the Delphi study was administered between May and July 2007 and had 14 panel members (as outlined in Table 2.5.1) respond. As was the case for the first round, the responses received in the second round were all elaborate, high-quality responses providing a rich array of data. With a response rate of more than 50% (14 out of 26) of the first-round participants, sufficient data could be collected to expand on and confirm the first-round results. Considering the time constraints and the extremely low second-round response rate experienced by Bauer (2001), receiving 14 thorough responses in the second round can be regarded as a success. However, as a point of stagnation with respect to the positioning of the individual panel members seemed to have been reached²² and under consideration of time limitations as well as an anticipated rapid drop of the response rate for any further round, the data collection was terminated at this stage. Once again, a report presenting an integrated summary of the findings of the first and second rounds was sent to the study participants, who were given the opportunity to reflect on and review the results.

¹⁹ Examples of the topical areas suggested for consideration in the second-round questionnaire include zoning, ship-borne and land-based tourism dichotomies, and discussions surrounding an integrated and overarching regulatory framework for Antarctic tourism.

²⁰ The executive summary did not highlight or list individual answers. Rather, representations of major tendencies in the answers or recurring observations and statements were summarised.

²¹ The answers by the individual participants were bulleted and listed under the respective questions. Where possible, similar answers by different participants were combined with the number of participants giving these answers noted down in the summary.

²² A point of stagnation regarding the positioning of the individual panel members seemed to have been achieved as none of the second-round participants changed their viewpoints regarding the problems or statements presented. This confirmed Bauer's conclusion that opinions are held very firmly among the members of the Antarctic community, and it showed that further rounds would not critically increase the insights won about the issues and topics covered in the questionnaires.

2.5.6 Data analysis

The replies to the first round questionnaires were tabulated in their entirety. A colour scheme was applied to distinguish easily between different categories and aid sub-categorical analysis. Under application of an iterative process of comparing and contrasting, all answers to each question were topically clustered and ranked according to their frequency of occurrence. The previous section on interviews already provided an explanation of and justification for the iterative comparative process, which will not be expanded upon at this point. The second-round answers, which critically looked at some of the points mentioned during the first round again, were analysed separately in the same manner and were then incorporated in the overall narrative presented in Chapter 6 that discusses the current state of and future policy options for Antarctic tourism.

Despite maintaining and presenting a variety of different opinions in the analysis of the Delphi study, the researcher tries to highlight a feasible, desired path of policy-making for Antarctic tourism, which is likely to encounter only a small amount of resistance. Ontologically, this positions the research project into a modified critical realism, which acknowledges different interpretations of reality and meaning being added based on personal experiences, preferences and culture, but favours an outcome involving less diverse and more general final recommendations, which pinpoint a few select and effective policy options.

2.6 Concluding thoughts and limitations of the research

Incompleteness, ipso facto, is necessarily a studied and a positive (not positivist!) interpretive attribute. Almost all qualitative analyses can only ever be partial, and therefore open-ended, forms of inquiry. (Hollinshead 2004a, p. 73)

Looking back to where the paradigmatic journey for the researcher began and where it took her, the question can rightfully be asked whether it was necessary for her to delve into a time-consuming process of deliberating the ontological, epistemological and methodological questions for this research project. Would the project have resulted in the same outcome had the researcher maintained the first version of her methodology chapter akin to her initial embracement of a slightly modified postpositivist paradigm? Probably not. It was mainly the researcher's uneasiness with some aspects of the postpositivist paradigm that let her embark on the lengthy process of redefining her and the project's paradigmatic position. However, she soon realised that the requirement of qualitative research to be reflective and reflexive was inexorably pushing her towards revisiting the paradigmatic questions with whose answers she struggled at the outset of the project. In order to do justice to the phenomena under scrutiny, to the study participants and to her own belief systems, the researcher finally decided to adopt a multi-paradigmatic approach. This allowed her to concentrate on the phenomena and on the wide range of stakeholder perspectives rather than to try to make the data, data collection and the analysis 'fit' one and only one paradigm.

Needless to say, there are certain limitations attached to a multi-paradigmatic approach. It may seem an 'easy way out', which only very few researchers appear to have accepted so far (Zahra 2006). However, as Zahra (2006) argues, using a multi-paradigmatic approach is far from being an easy exercise and entails a greater challenge than anticipated because the researcher has to consider the validity of each major inquiry paradigm and its applicability. Further, it is more difficult to justify methodological choices and prove their suitability within the ontological and epistemological position a researcher embraced when confronted with multiple paradigms. Finally, all other limitations of qualitative research, drawing on a small, non-

representative sample and an inability to prevent bias being introduced into the research process, apply to this project as well, including limitations regarding the generalisability of the results and specificity of the outcome of the research. It cannot be denied that the outcome of any similar qualitative research is influenced by the way questions were phrased and by the personalities and belief systems of the researcher and researched. However, as this thesis research tries to present an authentic and rich view of the perspectives of stakeholders with respect to Antarctic tourism regulation in order to assess the regime's effectiveness, qualitative research methods are a suitable choice. Interviews and a Delphi study can capture the richness and depth of stakeholder perspectives and can add a "feasibility–desirability" dimension to a discussion of the effectiveness of regulatory mechanisms. A multi-paradigmatic approach allows for greater flexibility and openness regarding stakeholder viewpoints and is suited to reflect a paradigmatically diverse pool of stakeholders.

CHAPTER 3



3 The cornerstones of Antarctic tourism

What an odd thing tourism is. You fly off to a strange land, eagerly abandoning all the comforts of home, and then expend vast quantities of time and money in a largely futile attempt to recapture the comforts that you wouldn't have lost if you hadn't left home in the first place. (Bill Bryson n.d.)

In order to analyse the effectiveness of the regulatory regime for Antarctic tourism, an understanding of the practicalities and theoretical underpinnings of Antarctic tourism is essential. This Chapter provides background information on the conceptual delineation of Antarctic tourism, its main operational characteristics and challenges, potential impacts of Antarctic tourism, the historical and anticipated future development of Antarctic tourism, the size and structure of the Antarctic tourism sector, aspects of self-organisation, and the driving forces behind Antarctic tourism. It mainly draws on Antarctic tourism research published within the last two decades²³, but includes historical information obtained from early papers by Reich (1980) and Codling (1982).

3.1 Definition of the term Antarctic tourism

The interest of most Antarctic tourists extends beyond passive sightseeing to an informed interest in scientific matters, including natural history. Antarctic tourists can be readily involved by cruise ships' specialist lecturing staff in systematic observations of specific topics, such as 'whale watches' and 'bird counts'. (Wace 1990, p. 339)

As outlined in Chapter 1, this thesis adopts a slightly narrower version of Hall's (1992) definition of Antarctic tourism by excluding firstly, the recreational activities of staff and researchers on scientific bases and secondly, other human activities that do not mainly serve a recreational and/or educational purpose. An example for the latter category could be bio-prospecting. Hall's (1992) definition of Antarctic tourism has found wide application with researchers generally tending to exclude the recreational activities of national programme staff (Stewart *et al.* 2006; Bauer 2001; Tracey 2001; Enzenbacher 1992b), even if the latter are recognised as participating in tourist-like activities when they are off duty (Maher *et al.* 2006, p. 54; Stewart *et al.* 2006, p. 196). Nonetheless, it is acknowledged that a range of definition problems have been encountered, which have been analysed in more detail by Hall & Johnston (1995) and Murray & Jabour (2004). Conveniently, Antarctic tourism is labelled as a 'non-governmental activity', which characterises a category comprising both commercial tourism and private expeditions (Tracey 2001, p. xviii). This categorisation invites problems as not all private expeditions are tourist expeditions (Tracey 2001), but may involve environmental campaigning, media and film work, or sports events.

The term 'adventure tourism' has been "applied indiscriminately to a variety of categories, increasingly to any non-governmental activity in Antarctica that is not sponsored by IAATO" (Murray & Jabour 2004, p. 313). However, the term 'adventure tourism' has not yet been properly defined (Murray & Jabour 2004, p. 312; IAATO 2003a). Murray & Jabour (2004, pp. 311–12) distinguish between four main types of non-governmental (tourism) activities in Antarctica: mainstream tourism, adventure tourism, small independent expeditions and large independent expeditions. They further argue that every form of Antarctic tourism aside from mainstream tourism has arbitrarily been labelled as 'responsible' or 'irresponsible' in the past (Murray & Jabour 2004). This is an important observation as it marks the line where value judgements on Antarctic tourism surpass a classification scheme

²³ The bulk of available Antarctic tourism literature was published within the last two decades. Moreover, as this thesis research focuses on Antarctic tourism regulation, which has changed significantly over the last few years, it is necessary to concentrate on recent publications.

based on the characteristics of and the motivation for travelling to Antarctica. It is worth noting here that as implied in Chapter 1, emotional perceptions and opinions taint the categorisation of Antarctic tourism.

It is interesting to note that in recent times, definitions of Antarctic tourism have been tightened. Maher *et al.* (2006, p. 54) defined Antarctic visitors as “those who come into physical contact with the continent, but also whose primary activity is simply ‘being there’ (i.e., getting to visit the continent)” for educational or recreational purposes. They clearly exclude any members of national programmes, who are in Antarctica as scientists or support personnel, and tourists taking part in Antarctic overflights as they do not come into physical contact with the continent (Maher *et al.* 2006, p. 54). It has to be questioned, though, whether Maher *et al.* (2006) also exclude cruise-only tourism, which caters for visitors that do not come into physical contact with the continent either.

Any thorough assessment of the (global) environmental impact of Antarctic tourism will have to take into account overflights. However, for the purposes of analysing the effectiveness of Antarctic tourism regulation, the exclusion of overflights is justifiable, because of the low numbers of tourists choosing this mode of transport, as well as the less than minor and transient regional impact. Consequently, as in Maher *et al.* (2006), this thesis largely ignores overflights and mainly focuses on ship-based tourism, as discussed in the introduction. However, cruise-only activities find consideration in the thesis.

Despite Maher's *et al.* (2006) elegant solution of linking Antarctic tourism to physical contact with the continent for recreational or educational purposes, this narrow definition of Antarctic tourism shall not find direct application in this thesis as it does not specifically regard the commercial aspect of Antarctic tourism. The commercial side of Antarctic tourism is of relevance as it guides the practice of the main part of the tour operators and determines their decision-making with respect to logistics, the activities they offer and the degree of self-organisation.

To state it clearly, this thesis is based on a definition of Antarctic tourism as *‘all human activities either mainly pursuing recreational and/or educational purposes or unequivocally catering for those who engage in recreational and/or educational activities in the Antarctic Treaty area south of 60° S Lat.’*

3.2 Characteristics of Antarctic tourism

Antarctica is the ultimate destination for anyone interested in natural history but it also challenges those people who visit to think broadly about our responsibilities to all life on Earth. (Robert Lambert as cited in Anonymous 2008)

In the following sections, a brief overview of the major defining characteristics of Antarctic tourism shall be given as background context to the thesis research. Specific reference is made to the spatial and temporal boundaries of Antarctic tourism, dominant ‘vehicles’ of tourism or modes of transport, the Lindblad model as one of the leading models for environmentally-conscious expedition-style cruising, the characteristics of typical Antarctic tourists, and the assumed benefits of tourism. Moreover, this section briefly outlines prevailing views regarding the legitimacy of Antarctic tourism.

3.2.1 Spatial and temporal boundaries of Antarctic tourism

Antarctic tourism is the only commercial activity that makes use of the Antarctic continent as a resource itself (Stewart *et al.* 2006, p. 196). In fact, ship-based tourism in the Antarctic is concentrated within 5% of the Antarctic continental landmass, an area made up of accessible ice-free coastal areas (Mason & Legg 2000, p. 358; Mason & Legg 1999, p. 78; Cessford 1997, p. 8). However, Antarctic tourism is not only confined to a small area, it is also restricted to a short season, which may result in greater pressure on the environment (Scott 2001, p. 969). As the main tourism period stretches from November to March (Mason & Legg 2000, p. 360), it coincides with the main breeding, and most sensitive, period for Antarctic wildlife (Pfeiffer & Peter 2004, p. 345).

Ninety percent of ship-based tourism operates out of South America and visits the Antarctic Peninsula (Mason & Legg 2000, p. 359; Polk 1998, p. 1300; Cessford 1997, p. 8). The Antarctic Peninsula possesses a rich and diverse fauna and flora and is climatically milder than other regions in the Antarctic (Hemmings & Roura 2003, p. 18; Enzenbacher 1992a, p. 258). Moreover, it is located closer to a large variety of ports in South America and relatively free of pack ice during the summer months allowing easier landings (Enzenbacher 1992a, p. 258). Finally, the Peninsula possesses many historic monuments and more than half of all scientific research stations (Mason & Legg 2000, p. 359; Cessford 1997, p. 8; Hughes & Davis 1995), which are often visited as part of the itinerary (Enzenbacher 1992a, p. 258).

3.2.2 Modes of transport

Antarctic tourism comprises either purely airborne and ship-based tourism or combinations thereof. Most of the ship-based tourism activities involve short landings at easily accessible sites, but some operators also offer overnight camping (IAATO 2006d & 2007b). In addition to airborne and ship-based tourism, land-based operations form a third main division of Antarctic tourism. Land-based tourism, which can generally be regarded as special interest or adventure tourism, usually utilises aircraft to transport tourists to the Antarctic continent.

A small proportion of Antarctic tourism is airborne, offering not only different experiences but also sparing the tourists arduous time travelling in rough seas (Tracey 2001, p. 61). Airborne tourism has occurred since the beginning of tourist activities in Antarctica and consisted primarily of overflights – with the exception of a period of abstinence between 1979/80 and 1994/95 after the disastrous crash of an Air New Zealand DC10 at Mount Erebus. The history of airborne tourism has been recited in various publications by Bauer (2007), Rubin (2005), Tracey (2001), Enzenbacher (1995b), Stonehouse & Crosbie (1995), Headland (1994), Stonehouse (1994), Swithinbank (1993), Wace (1990) and Reich (1980), and shall not be repeated at this point. However, two important issues pertinent to the management of airborne tourism have to be acknowledged. Firstly, NAPs, particularly Chile and Argentina, have, on an irregular basis, carried tourists to their bases on King George Island and Seymour Island respectively (Tracey 2001; Headland 1994; Swithinbank 1993). Secondly, some NAPs allow tourist flights to make use of their airstrips, particularly in the Antarctic Peninsula region (Tracey 2001), and various airlines such as Aerovías DAP now operate regular air transport for tourists from South America (DAP 2007). Furthermore, flights for tourists and scientists alike from South Africa to a specially constructed runway at the Russian Novolazarevskaya Station in Dronning Maud Land are now organised by the company Antarctic Logistics Centre International (ALCI) on a regular basis (ALCI 2007). In the 1992/93 season, Chile dis-

continued carrying tourists on their official NAP flights and closed Hotel Estrella Polar, an 80–berth tourist accommodation at the Chilean Teniente Rodolfo Marsh Station on King George Island (Tracey 2001; Rubin 1996; Headland 1994). However, opportunities still offered by NAPs to tour operators should not be underestimated and may considerably influence the development of tourism in the future.

Adventure Network International (ANI)/Antarctic Logistics & Expeditions (ALE) organise the greatest proportion of airborne operations in support of their land-based adventure tourism activities in Antarctica. ANI/ALE maintain a semi-permanent field camp near their blue-ice runway in the Patriot Hills that can accommodate 70 people (ANI 2007; Tracey 2001). From their field camp, ANI/ALE service four main destinations by air: the Dawson-Lambton Glacier, Blue 1 in Dronning Maud Land, the South Pole and Vinson Massif (ANI 2007). Repeatedly, ANI/ALE have provided support to independent expeditions in distress and have acted as an IAATO emergency contact station (Tracey 2001, p. 65). Currently, land-based tourism operations only make up a very small part of Antarctic tourism, and the ANI/ALE campsite in the Patriot Hills is the only non-governmental land-based facility in Antarctica (ANI 2007; Tracey 2001).

A great proportion of Antarctic tourism continues to be ship-based²⁴. More than 90% of tourists visit Antarctica on ship-based itineraries (Bertram & Stonehouse 2007), still largely involving small or medium-sized vessels (Hemmings & Roura 2003, p. 18; Dingwall & Cessford 1996, p. 65) making ship-based tourism the most popular form of Antarctic tourism, followed by airborne tourism (Mason & Legg 2000, p. 360). Ship-based tourism is very self-sufficient, as it does not rely on on-shore facilities (Johnston 2006, p. 48; Dingwall & Cessford 1996, p. 65; Enzenbacher 1992a, p. 258). Therefore, according to Mason & Legg (1999, p. 78), there is hardly any necessity for land-based tourist facilities as most of the tourism in the Antarctic is based on vessels.

Antarctic ship-based tours are considered ‘adventure expeditions’ that involve passenger briefings and debriefings, lectures, experienced captains and expedition leaders, landings with no more than 100 passengers ashore at any one time, close monitoring of passenger behaviour ashore, recap or debriefing sessions in the evenings, and the instilling of a conservation ethic among the passengers (Mason 2005, p. 191; Mason & Legg 1999, p. 80; Stonehouse 1994, pp. 202–203). Landings are usually conducted in inflatable rubber boats (often referred to by the brand name Zodiac) and in small groups of 10–15 passengers (Mason 2005, p. 191), who are not allowed to wander beyond a relatively small territory, not far from the point of embarkation (Mason & Legg 1999, p. 80). The use of small, powerful and manoeuvrable inflatable rubber boats for ship-to-shore operations enables access to numerous areas previously inaccessible for ship-based tourism (Enzenbacher 1992b). Furthermore, there is the potential to make use of helicopters for landings in the Antarctic (Tracey 2001) as a few icebreakers carry helicopters for reconnaissance.

In terms of technical and logistical issues, it is important to note that cruise tourism in Antarctic waters potentially involves navigating amidst icebergs or ice floes in poorly charted waters. Currently, ice navigation is not formally regulated (Tracey 2001, p. 54). Many of the smaller expedition vessels are Russian icebreakers or vessels of the Russian academic fleet, which became available for long-term charter on the free market after the collapse of the Soviet Union (Taylor, pers. comm. 2008; Headland

²⁴ Snyder (2007b, p.56) estimates that, for both polar regions, the economic value of cruise operations can be estimated to total many hundreds of millions of dollars, which serves as an important attractor for tour operators to enter the market.

1994) and were converted into passenger ships. However, some cruise ships operating in the Antarctic are not ice-strengthened. These ships attempt to stay out of the ice, but the risk of them encountering ice in Antarctic waters remains.

3.2.3 Lindblad pattern

A large proportion of Antarctic cruise tourism is conducted in accordance with the model that was originally put forth and encouraged by Lars-Eric Lindblad and that is rooted in a strong environmental conservationist ethic (Stonehouse 1994, p. 202). The Lindblad model was designed for and has proven to work best with small vessels (100–140 passengers) (Mason & Legg 1999, p. 80; Stonehouse & Crosbie 1995; Stonehouse 1994, p. 202). The model aims at instilling and supporting a distinct environmental conservation ethic in the passengers (Mason & Legg 1999, p. 80). According to Stonehouse & Crosbie (1995, p. 222), the Lindblad model has succeeded in maintaining environmentally conscientious behaviour among operators and tourists and limiting environmental impacts while allowing for expedition cruising involving relative freedom as regards the selection of landing sites and itineraries as described above.

The Lindblad model applies to expedition cruising involving landings of passengers in small groups of 10–15 tourists accompanied by a guide as described in the previous section (Stonehouse & Snyder 2007, p. 45; Mason 2005). Tour guides closely monitor the behaviour of tourists on shore and respond to “any transgression of codes of conduct/guidelines with an on-the-spot admonishment, and tourists can be sent back to the cruise ship” (Mason 2005, p. 191). Tourist briefings on board the ship are used to outline expected or experienced difficulties and aim at strengthening the environmental ethic in passengers (Mason 2005). Other mandatory briefings used in the 1990s dealt exclusively with conduct ashore (Taylor, pers. comm. 2008).

Over the years, the Lindblad pattern evolved and changed. In 1990/91, Lars-Eric Lindblad introduced large-ship expedition cruising with the M/S *Ocean Princess* carrying 350 passengers and then in 1994, under Orient Lines, taking the M/S *Marco Polo* with 500 passengers on board to Antarctica on her ‘Grand Antarctic Circumnavigation’ (Taylor, pers. comm. 2008; Liming 1996). The utilisation of bigger cruise vessels resulted in a changing nature of expedition tourism with fewer landings, tourists divided in groups for landings and shorter time spent ashore by each individual passenger (Taylor, pers. comm. 2008). With the rapid increase in Antarctic tourism in the 1990s when bigger vessels started to explore the Antarctic carrying passengers that spoke different languages, “it has become more difficult to inspire the conservation ethic” (Mason & Legg 1999, p. 80).

3.2.4 Tourists

At this point, only a brief summary of the observations and reports of various researchers will be included to provide some context. The demographics and attitudinal features of Antarctic tourists have been researched by Davis (1995) and Enzenbacher (1995b), who both conducted extensive surveys. Both of these surveys indicate that the majority of Antarctic tourists are retirees and that a high proportion are professionals or managers. Moreover, the surveys confirmed, what Wace (1990, p. 336) acknowledged earlier, that the majority of Antarctic tourists hail from Western countries in the Northern Hemisphere.

Generally, the typical Antarctic tourist is described as well-educated, well-travelled and relatively wealthy (Kriwoken & Rootes 2000, p. 140; Wace 1990, p. 336). Cessford & Dingwall (1996) researched tourism experiences in the sub-Antarctic and discovered “that there was a high degree of tourist acceptance of the regulations imposed for controlling visits ashore and no real de-

mand for development of any visit-related facilities” (Cessford 1997, p. 10). Cessford & Dingwall’s (1996) observation confirm the incorporation of Antarctic tourists in the *explorer* or *off-beat adventurer* categories of the tourist typology used by Prosser (1992) and presented in Table 3.2.1. Table 3.2.1 is based on Cohen’s (1972) groundbreaking discussion of the notion of the sociology of tourism, rooted in his suggestion to embrace a typology of tourism based on tourist experiences.

Table 3.2.1: Typology of tourists according to their numbers and impacts

<i>Type</i>	<i>Numbers</i>	<i>Impacts</i>
Explorers	very few	accept local conditions
Off-beat adventurers	small numbers	revel in local conditions
Elite tourists	limited numbers	(a) demand western amenities (b) roughing it in comfort
Early mass tourists	steady flow	look for western amenities
Mass charter tourists	massive numbers	expect western amenities

Source: Prosser (1992, p. 41)

Compared to other destinations, visitor numbers in Antarctica are still very low as argued in Chapter 1, and local conditions are generally accepted by tourists, as illustrated by Cessford & Dingwall’s (1996) research.

More recently, Maher *et al.* (2003a&b, 2006) conducted an extensive survey of Antarctic tourist motivation and expectation, the results of which promise to provide not only a better understanding of the driving factors behind Antarctic tourism demand, but also the substantiation or deconstruction of the ‘Antarctic tourism as ambassadors’ model. Other studies have looked at the perceptions of NAP staff with respect to tourists. An example is Stewart’s *et al.* (2006) study analysing the attitudes of a sample of New Zealand’s Antarctic community towards tourism. The study was conducted in 1999 in Scott Base, Ross Sea. Stewart *et al.* (2006) concluded that whereas a few study participants were very cautious with regards to Antarctic tourism and raised issues about potential impacts of tourism on science activities, the majority passively accepted tourism as part of Antarctica’s present and future acknowledging that “the continent should not be just for science” (Stewart *et al.* 2006, p. 208)²⁵. Overall, Stewart *et al.* (2006) recommended that further research should focus on including the opinions of tour operators, representatives of environmental organisations, the New Zealand public and ATCPs as their work had not incorporated these stakeholders.

3.2.5 Benefits of tourism

It has been claimed that Antarctic cruises educate tourists about ongoing scientific exploration and environmental monitoring and increase their awareness of the Antarctic environment, its values and the importance of its conservation (Mason 2005; Prosser 1998; Dingwall & Cessford 1996, p. 65; Beck 1990, p. 345). Consequently, tourists are regarded as supporters and advocates for the conservation of Antarctica (Mason 2005; Stonehouse 1994, p. 201), which may result in an increased level of public awareness that can be beneficial to the conservation of the Antarctic continent (Snyder 2007a; Rothwell 1992). However, two

²⁵ The participants of Stewart *et al.*’s (2006) study stressed that tourism is part of what Antarctica stands for, but that nevertheless, tourism should be controlled and well-managed such that impacts are minimised (Stewart *et al.* 2006, p.208). Finally, some study participants expressed strong support for and acceptance of tourism and accentuated the role tourism plays in educating people who could then support Antarctic conservation (Stewart *et al.* 2006, p.209). Stewart *et al.* (2006, p.210) remarked that it was interesting to note that none of their 32 participants rejected tourism outright, although one participant suggested that Antarctica should be turned into a World Park keeping all humans out.

notes of caution have to be expressed at this point. Firstly, this ambassadorial role of Antarctic tourists has not been adequately demonstrated (Stewart *et al.* 2006, p. 197). Secondly, tourists acting as Antarctic ambassadors could also entail the risk of having them promote Antarctica as a destination, increasing the visitation rate further (Mason & Legg 2000, p. 361; Mason & Legg 1999, p. 79).

Benefits might be derived from tourists seeing the necessity for and appreciating polar research, which could potentially lead to more public funding being made available to polar science, as tourists are taxpayers and voters (Wace 1990, p. 339). Further, it has to be acknowledged that many tourists and tour operators have donated money to various environmental and heritage conservation projects (Snyder 2007a, p. 17). Moreover, tourism results in financial benefits (Beck 1990, p. 345) for tour operators and other stakeholders. Scientific stations might benefit from the sale of souvenirs (Snyder 2007a, p. 17). Tour operators provide logistic support for NAPs, other research activities and environmental monitoring efforts, and could potentially be of assistance in emergencies (Bertram 2007, p. 151; Landau & Splettstoesser 2007, pp. 2–3; Johnson & Kriwoken 2007, p. 90; Tracey 2001, p. 119; Dingwall & Cessford 1996, p. 65).

According to Hall (1992, p. 4), it must not be forgotten that Antarctic gateway cities and ports report considerable economic gains from Antarctic tourism as well. In addition to economic gains, tourism can be used to support the political objectives and territorial claims of various countries as highlighted by the following quote.

From the perspective of claimant nations, tourism in Antarctica offers a potential mechanism to justify territorial claims and a possible source of funds to subsidize [sic] stations and scientific research. (Hall 1992, p. 7)

This political perspective should not be underestimated, as some South American claimants appear to promote tourism for the economic and political reasons only (Enzenbacher 2007, p. 172).

Of course, tourism as much as any other human activity in the Antarctic, is a two-edged sword, entailing not only benefits but also detriments of an environmental, cultural, social, economic or political nature (Mowforth & Munt 2003; Page & Dowling 2002; Hall & Kearsley 2001; Holden 2000; Fennell 1999). These adverse impacts of tourism are described in a separate section later in this Chapter.

3.2.6 Legitimacy of tourism

Generally, Antarctic tourism is regarded as a legitimate, peaceful activity (Johnson & Kriwoken 2007, p. 88; Murray & Jabour 2004; Bastmeijer & Roura 2004; Cessford 1997, p. 7; Beck 1990, p. 344), which has developed naturally alongside the ATS (Scott 2001, p. 967). “A total prohibition of tourism has never been discussed” (Bastmeijer & Roura 2004, p. 774), and the point where tourism might have been able to be prohibited in the Antarctic has passed (Scott 2001, p. 967). In fact, Beck (1990) goes as far as stating that “any attempt to exclude tourism from Antarctica was deemed to be both unacceptable and inappropriate” (Beck 1990, p. 345). However, he qualifies his statement by adding that tourism in Antarctica has to be controlled and effectively regulated to deserve its legitimacy (Beck 1990, p. 345). In this context, the explicit referrals of the Protocol to tourism in Article 3 (4), Article 8 (2), Article 15 (1) and Annex 3 Article 1 (1) might lend additional legitimacy to tourism. Despite the general

recognition of the legitimacy of Antarctic tourism, the ATCPs assert that science and environmental values retain their superiority in Antarctica, “whereas tourism ... is not otherwise an embedded Antarctic activity” (Hemmings & Roura 2003, p. 13).

3.3 The history of Antarctic tourism

A problem with history of polar tourism is a scarcity of records from many operations, ancient and modern. There is no publishing imperative such as in scientific research. (Headland 1994, p. 271)

Over the years, there have been numerous publications commenting on the development of Antarctic tourism and necessarily recounting historical milestones. An early paper by Reich (1980) was among the first comprehensive articles detailing the scale and operations of Antarctic tourism. More than a decade later, Headland (1994) presented a thorough overview of the different developmental stages of Antarctic tourism – from early expeditions to the period of modern tourism, which according to Headland (1994) commences when the first purpose-built and ice-strengthened vessel, the *Lindblad Explorer*, began expedition cruising in the Antarctic in 1970. In 2005, Headland published an even more comprehensive chronology of Antarctic tourism.

Further historical information has been incorporated in papers by Headland (2005), Murray & Jabour (2004), Hemmings & Roura (2003), Tracey (2001), Hall & Johnston (1995), Stonehouse & Crosbie (1995), Enzenbacher (1992b, 1993, 1994), Stonehouse (1994), Swithinbank (1993), , Headland (1992), Wace (1990), and Codling (1982). Because of the detailed accounts of the past development of Antarctic tourism presented in these publications, this section will not give a comprehensive overview of the history of tourism to the Antarctic. Instead, it shall suffice to present a few milestones in the history of Antarctic tourism that relate specifically to the context of this thesis (see Figure 3.3.1 on the following page).

Although tourism to the Antarctic took off slowly, in the 1950s, it was not until 1966 that annual cruises to the Antarctic were organised (Headland 1994). Even then, tourism numbers were low, hovering well below the 1,000 mark before 1968/9 (Tracey 2001). In the late 1980s, Antarctic tourism began its phenomenal growth, which exceeded all expectations and soon began to raise concern among Antarctic Treaty Parties (Bastmeijer & Roura 2004; Dingwall & Cessford 1996; Hall 1992). The rapid increase, particularly in ship-based tourism activities, is visualised in Figure 3.3.2 on the following page. It has to be noted that Figure 3.3.2 is likely to be an underestimation of the actual numbers of tourists due to the difficulty in obtaining comprehensive records, particularly for the time prior to Regulations 3 (1995 & 1997). The latter require tour operators based in Party states to forward an advance notification and post-visit reports to their national governments.

	AIRBORNE TOURISM	SHIP-BASED TOURISM	LAND-BASED TOURISM
1956	First tourist flight to the Antarctic Peninsula in a DC6B		
1957	Pan American Stratocruiser lands tourists at McMurdo Station, Ross Island		
1958		First tourist cruise to Peninsula with Argentinean naval transport vessel <i>Les Eclairceurs</i>	
1966		Lars-Erik Lindblad organises a tour to the Antarctic Peninsula with the Argentinean naval vessel <i>Lapataia</i> marking the beginning of annual tourists cruises to the Antarctic	
1968		First tourist vessel to cross the Antarctic Circle and visit the Ross Sea	
1970		First voyage of the Lindblad Explorer marking the beginning of the modern period of Antarctic tourism	
1973		First cruise-only tour off the Antarctic Peninsula	
1977	A series of tourists overflights from Australia and New Zealand begins		
1979	Crash of Air New Zealand DC 10 on Mt. Erebus, Ross Island		
1984			Establishment of a first 'hotel' on a Chilean station on King George Island
1985			Regular flights supporting land-based operations by Adventure Network International
1989		Grounding and sinking of the Argentinean naval vessel <i>Bahio Paraíso</i> with tourists on board	
1994/95	Qantas resumes tourist overflights		
1996/97		First tourist vessel to circumnavigate Antarctica (<i>Kapitan Khlebnikov</i>)	
2007		Sinking of the M/S Explorer	

Figure 3.3.1: Milestones in the history of Antarctic tourism

(based on Tracey 2001; Headland 1994; Stonehouse 1994; Headland 1992; Wace 1990; Reich 1980)

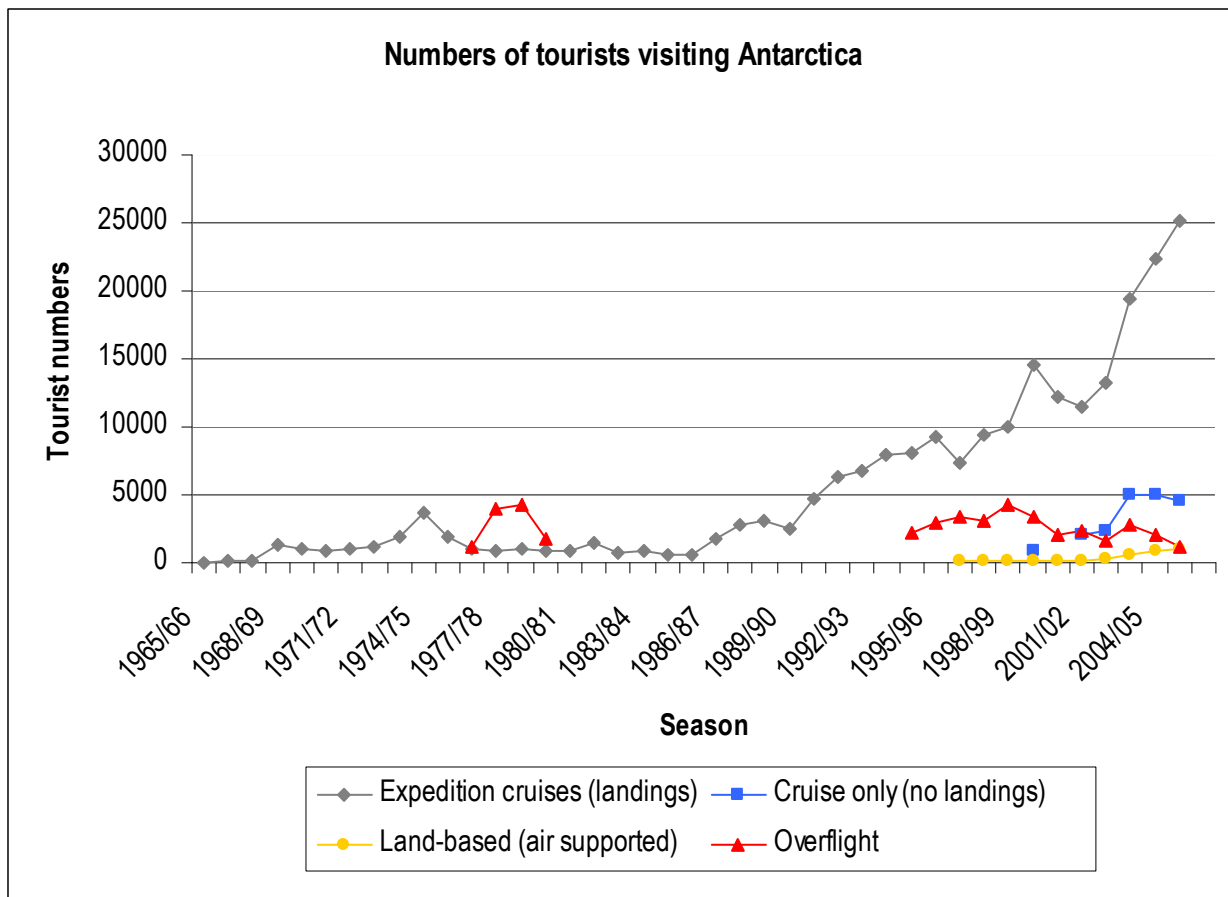


Figure 3.3.2²⁶: Antarctic tourism trends by main mode of transport
(IAATO 2005a-c, 2006a, 2007a; Headland 1994 & 2005; Enzenbacher 1993)

Records were not available about the tourist visits to the South Shetland Islands in the 1980s, which is the reason for the slight misrepresentation of the beginning of land-based tourism. It is interesting to note that, with the exception of the landing of the Pan American Airways flight in 1957, land-based tourism did not commence until 1983–84 when a “Chilean Air Force Hercules aircraft carried up to 200 passengers from Punta Arenas to the South Shetlands, where the Chilean Teniente Marsh base on King George Island boasts a 100–bed ‘hotel’” (Wace 1990, p. 331). This ‘hotel’, which was named ‘Hotel Estrella Polar’, provided accommodation for tourists who visited King George Island on chartered airplanes (Headland 1994). The transportation and accommodation service was run annually through the Chilean Air Force, but was discontinued in 1992/3 (Headland 1994, p. 277). Aside from financial benefits for Chile, these tourists earned King George Island a reputation as the “first tourist resort in Antarctica” Wace (1990, p. 331).

In the early days of land-based tourism, visits were irregular and visitor numbers negligible. It is for these reasons, that Figure 3.3.2 does not portray land-based tourism activities prior to the mid-1990s, when ANI ran well-established regular operations from its semi-permanent field base in the Patriot Hills (ANI 2007).

²⁶ Thanks to Machiel Lamers for compiling and providing the data.

As this thesis focuses on ship-based tourism, Figure 3.3.3 details the development of tourism numbers in this – in terms of scale currently most significant – segment of Antarctic tourism.

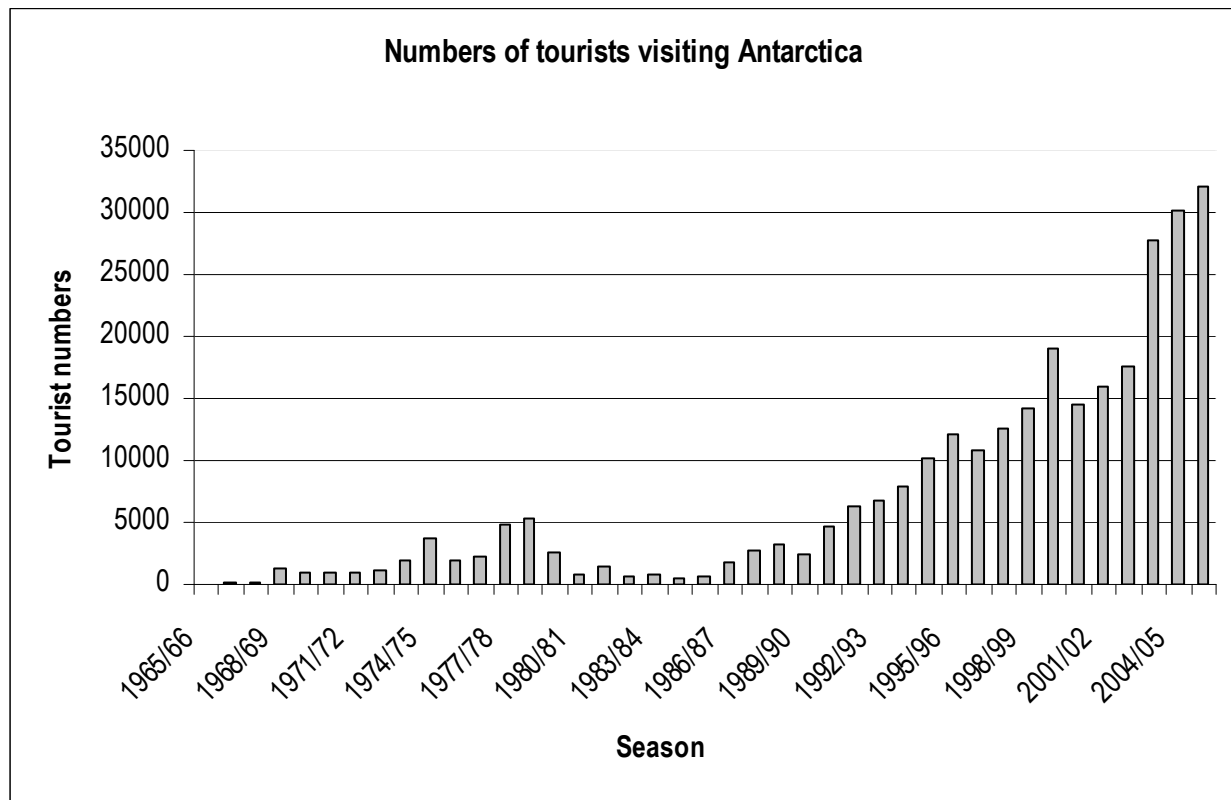


Figure 3.3.3: Antarctic tourism trends by numbers of tourists visiting Antarctica (ship-borne tourism with landings and cruise-only tourism)
(IAATO 2005b, 2006a, 2007a; Headland, 1994 & 2005; Enzenbacher 1993)

It can be seen that from the late 1960s on, ship-based tourism showed erratic but continuous growth rates (Stonehouse 1994, p. 199), with a significant intensification of activities from the 1990s onwards (Hemmings & Roura 2003, p. 18).

The development and growth of Antarctic tourism, along with diversification of and changes within the industry, are of significance for an informed discussion of effective regulatory mechanisms. The next section looks at trends presented in the literature that have been predicted to dominate the future development of Antarctic tourism.

3.4 The future of Antarctic tourism

... the challenge for the polar regions in the coming years will be to develop comprehensive international regulatory and governance regimes that can manage not only the effects of global environmental change but also flows of people. Clearly, such a goal requires not just political will and stakeholder interest but also a strong scientific and research base. (Hall 2007, p. xiv)

As long ago as in the early 1990s, Hall (1992) suggested that two factors would primarily determine the growth of Antarctic tourism: polar technology and the development of special interest tourism such as adventure tourism, educational tourism or ecotourism (Hall 1992, p. 4). Technology has seen some advance with respect to communication between vessels, remediation of environmental damage (such as oil spills), vessel tracking and scheduling, although none resulted in significant changes to the way Antarctic tourism is conducted. On the other hand, special interest tourism has picked up and led to an increasing diversification of Antarctic tourism activities over the last few years. Traditionally, ship-based tourism was characterised by locally concentrated activities. Commonly, passengers were allowed to wander not more than a few hundred metres from the point of landing for a reasonably short time (Bertram 2007, p. 165). Now, Antarctic tourism activities include yachting, kayaking, surfing, skiing, helicopter flights, mountaineering, climbing, snowboarding, running marathons and scuba diving (Taylor, pers. comm. 2008; Bertram 2007, p. 165; Bastmeijer & Roura 2004, p. 765). These tourism activities involve higher levels of uncertainty than traditional and well-established forms of tourism to the Antarctic and require additional precautions in the planning process (Bastmeijer & Roura 2004, p. 772)²⁷.

Polk (1998) stresses that increasing pressure is put on tour operators to take the little step further and incorporate activities that set them apart from other operators as the demand and supply for an Antarctic tourism product increases. By the same token, the “increasing demand has mounted pressure on tour operators to provide visitors with overnight accommodation and airstrips” (Polk 1998, p. 1401). It has been suggested that the rapid growth of tourism induces concern about the potential impact on wildlife, on scientific activities and the increasing likelihood of on-shore support facilities being built (Dingwall & Cessford 1996, p. 66; Hall 1992, p. 6). This raises the question, how long the premise of easy and convenient accommodation on offshore ‘floating hotels’ will remain the dominant line of thinking. There is no doubt that land-based tourism will continue (Wace 1990), but will it, contrary to current belief (IAATO 2007e), start reporting the same growth rates like ship-based tourism, possibly as a result of easily accessible airstrips operated by NAPs? The question is whether the high costs and risks associated with land-based tourism will continue to limit the number of land-based tourists in Antarctica or whether land-based tourism will follow the polynomial path predicted by least squares fit and the resulting trend line that is portrayed in Figure 3.4.1 on Page 59. The trend line presented in Figure 3.4.1 is calculated based on the growth rates the Antarctic tourism sector experienced after 1985/6. The notion of market saturation and diminishing growth rates, or even negative growth rates in a potential stage of declining popularity of the Antarctic tourism destination, as postulated by Butler (1998) in his discussion of tourism destination growth curves, is ignored in Figure 3.4.1.

²⁷ Climate change will also result in changes of tourist activities in both polar regions (e.g. less ice may lead to an extended season), with tour operators embracing the new opportunities and, at the same time, trying to circumvent negative consequences (Johnston 2006, p.49).

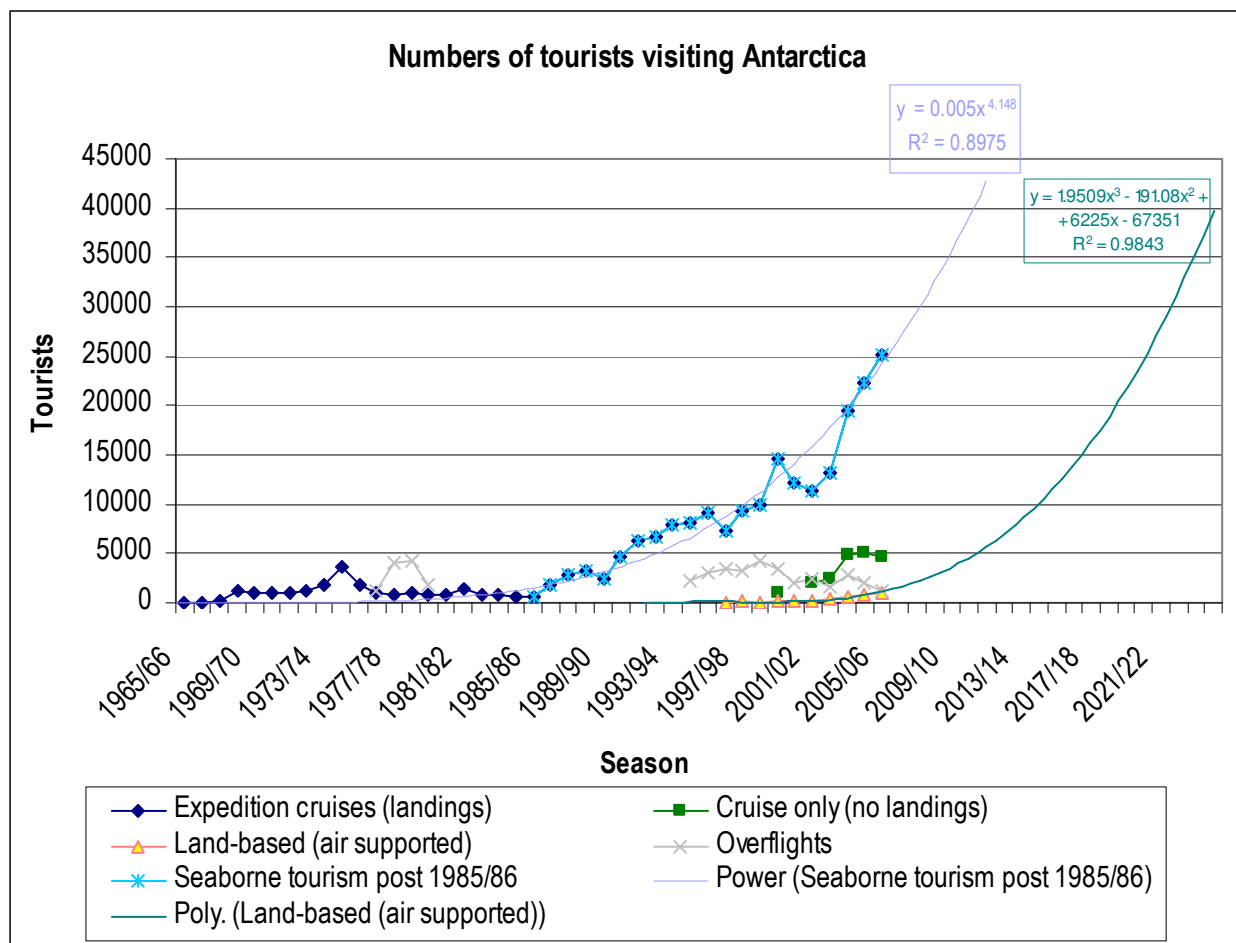


Figure 3.4.1: Predicted Antarctic tourism development by main mode of transport
(IAATO 2005b, 2006a, 2007a; Tracey 2001; Headland 1994 & 2005; Enzenbacher 1993)

Interestingly, when Tracey (2001) used the least squares method to predict the development of Antarctic ship-based tourism based on available records between 1985/6 and 1999/0, he anticipated tourist numbers of around 16,000 in 2004/5 and 20,000 in 2009/10 (Tracey 2001, p. 49). Already the 2004/5 season saw more than 22,000 tourists landing in Antarctica. This questions whether, in recent years, Antarctic tourism recorded exponential growth rates, which could not be adequately described by a linear least squares trend line. In this case, forecasts may have to be corrected upwards.

It is anticipated that Antarctic tourism will further grow in scale with a particular increase of larger vessels and land-based tourism operations, and with small-vessel operations and yachting expeditions remaining stable or only increasing slightly (Bastmeijer & Roura 2004, p. 766). The most significant growth rates are expected in the Antarctic Peninsula region due to its accessibility and its relatively high number of attractions (Cessford 1997, p. 8). In contrast, ship-based tourism to the Ross Sea is not expected to grow considerably because of the high costs associated with a visit, the greater risk of unfavourable ice conditions making certain sites inaccessible, and the reduced comfort for passengers resulting from the long sea time (Cessford 1997). It usually takes 2–4 days to reach the Antarctic Peninsula, whereas a cruise across the Southern Ocean from New Zealand to McMurdo Sound requires about 6–10 days (Taylor, pers. comm. 2008).

As is currently the case, tourist visits will continue to concentrate on relatively few sites²⁸, although new landing sites will be added as well (Bastmeijer & Roura 2004, p. 766). Even now, encounters between cruise vessels in the Antarctic Peninsula region are almost inevitable (Bertram *et al.* 2007a, p. 178; Landau & Splettstoesser 2007, p. 201) and will become more frequent. Considering the growth rates Antarctic tourism experiences, the focus on a small number of sites may result in crowding, especially at the most popular sites in the Antarctic Peninsula region (Johnston 2006, p. 48). This in turn may lead to a search for more and more landing sites.

Hemmings & Roura (2003) anticipate a shift from small owner-operator type tourism to larger multinational companies operating larger cruise vessels along with an increasing interest in mass tourism. This development is best illustrated by an overview of tourist vessels operating in Antarctic waters (see Table 3.4.1).

Table 3.4.1: Commercial tourist vessels operating in Antarctica by capacity (1990–2007)

Season	Category 1			Category 2	Category 3	Total
	< 50 passenger ships:	51–110 passenger ships:	111–200 passenger ships:	201–500 passenger ships:	> 500 passenger ships:	
1989/90	1	1	2	0	0	4
1990/91	1	2	3	1	0	7
1991/92	2	1	3	3	0	9
1992/93	2	3	4	3	0	12
1993/94	1	4	4	1	2	12
1994/95	5	5	4	1	1	16
1995/96	6	4	4	0	1	15
1996/97	5	3	5	0	0	13
1997/98	3	4	5	1	1	14
1998/99	4	3	7	0	1	15
1999/00	4	7	6	0	4	21
2000/01	18**	7	5	1	1	32
2001/02	22**	8	4	1	2	37
2002/03	29**	7	6	1	4	47
2003/04	26**	9	8	3	5	51
2004/05	24**	11	8	3	6	52
2005/06	14**	13	8	4	5	44
2006/07	16**	11	7	5	10	49
2007/08*	18**	15	7	6	10	56

Note: * Estimate based on IAATO pre-season vessel itinerary; ** Estimate of the number of yachts included

Sources: Headland (2005); IAATO (1997–2002, 2003b, 2004, 2005b&c, 2006a, 2007a)

²⁸ According to IAATO figures, 85% of all tourist visits were concentrated on only 30 sites in the 2005/06 season (Bertram 2007, p.160).

Table 3.4.1 shows an increase in the proportion of Category 2 and 3 vessels (201–500 and > 500 passenger vessels) to Category 1 vessels over the last 10 years, reflecting the recent development of large-liner cruising into “the fastest growing sector of Antarctic ship-based tourism” (Bertram 2007, p. 155). Particularly during the last two seasons, the number of large cruise-only vessels navigating in Antarctic waters almost doubled in comparison to earlier years.

In fact, in February 2007, the M/S *Golden Princess*, a not ice-strengthened 3100-passenger cruise liner, visited Antarctica with 2,425 passengers and approximately 1,100 crew on board (Bertram *et al.* 2007a). The M/S *Golden Princess* was operated by Princess Cruises, who had brought large cruise liners to Antarctica in January 2006 (the M/S *Regal Princess* with 1,553 passengers on board), in December/January 2003/04 (the M/S *Royal Princess* with 1,022 passengers on board) and in December-January 2004/05 (the M/S *Royal Princess* with 1,032 passengers on board) (Bertram *et al.* 2007a, p.178). According to Bertram *et al.* (2007a, p.179), the trip of the M/S *Golden Princess* was carefully planned and operated, had an experienced captain and ice master on board and kept to well-charted ice-free waters. They conclude that despite concern and criticism regarding large vessels, no proper evidence exists to make a convincing case against the operation of large vessels in Antarctica, particularly as the latter normally operate on conservative itineraries in well-charted waters (Bertram *et al.* 2007a, p. 179). Nonetheless, the criticism that the operation of these large cruise ships in Antarctic waters “undermine[s] the ethos of small ships and visitor numbers, which has prevailed until now” (Hemmings as cited in Squires 2006) dominates the literature (Bertram 2007, p. 154).

Events such as these have roused suspicion among some researchers and policy-makers that a mass market is expected to develop alongside specialised niche markets that focus on adventure tourism and special events (Hemmings & Roura 2003). As this development is comparable to tourism development in other regions of the world, it is doubtful that any characteristics of Antarctica will inhibit such a development – save for disastrous accidents costing many lives (Hemmings & Roura 2003, p. 18). Hemmings & Roura (2003, p. 21) go as far as emphasising that Antarctic tourism development, which principally follows the patterns of tourism growth in other parts of the world, could peak in the establishment of secondary and tertiary tourism developments such as theme parks, convention centres, and casinos.

However, it has also been shown in the past that tourism development can be influenced by lobbying and political decisions. As reported by HRSCERA (1989, pp. 24–26) and Hall (1992), Helmut Rohde and Partners proposed *Project Oasis*, a combined science–tourism–environmental complex to be built in the Vestfold Hills on Australian Antarctic Territory. This complex would have been able to cater for 344 visitors, 70 scientists and 174 staff at any time, and was thought to be able to be run year round. Rohde and Partners’ detailed plans also suggested that two Boeing 747 flights were to operate between the Australian mainland and Davis Station, from where *Project Oasis* could have been serviced. Overall, *Project Oasis* had been expected to maintain a visitor load of 16,000 each year. *Project Oasis* was prominently fought by environmental conservation groups, e.g. Greenpeace, the Wilderness Society and the Australian Conservation Foundation, and was not realised (Tracey 2001; Hall 1992, p. 6).

Based on the current growth of the Antarctic tourism sector, Powell (2006) projects approximately 200,000 tourists visiting Antarctica in the 2021/22 season, which represents an exponential growth rate exceeding the predictions made in Figure 3.4.1.

Generally, Powell (2006) expects the following developments to take place over the next 15 years:

- The opening up of new markets for Antarctic tourism, primarily in Asian countries such as India and China, further raises visitor numbers.
- More ships will visit Antarctica, including giant cruise liners.
- More flights to Antarctica will be offered and governments may allow operators to use their landing fields.
- Increased pressure will be experienced on frequently visited sites.
- Pioneer tour operators may become frustrated with the overcrowded Peninsula region and may move on.
- Increasingly, the boundary between national programmes and non-government expeditions will become blurred as tour operators may cater for passengers that would like to engage in research (and as national programmes might welcome the dollar that can be earned by allowing paying visitors onto their stations).
- A multinational hotel chain might press to build 5–star eco-lodges in Antarctica.

It is beyond question that increasing numbers of tourists will result in greater environmental, political and social impacts of Antarctic tourism. A proactive, effective regulatory regime would take these potential developments of Antarctic tourism and their implications into account and would have mechanisms in place that allow adequate responses to these developments (Riddle 2000). Chapter 7 will analyse questions related to potential future trends in Antarctic tourism development and their consequences for tourism regulation in greater detail.

3.5 Adverse impacts of Antarctic tourism

There appears to be general agreement that the hundreds of thousands of tourists who have visited Antarctica in the half-century of commercial tourism have left surprisingly few traces. (Stonehouse & Snyder 2007, p. 45)

Because of the lengthy regeneration rates of flora and fauna, and the slow breakdown of disposed waste products and sewage, “[i]n a pristine, fragile environment such as Antarctica, any activity has a noticeable impact” (Prosser 1995, p. 115). Various specific characteristics of Antarctica such as the correspondence between the tourism season and the peak breeding season for the majority of Antarctic wildlife as well as the human–wildlife competition for ice-free and biodiversity-rich areas make the main tourism landing sites very vulnerable to cumulative impacts (Bastmeijer & Roura 2004, p. 766). Here, cumulative impacts can be defined as “the impact[s] of combined past, present and reasonably foreseeable future activities” (Bastmeijer & Roura 2004, p. 766).

Due to the relatively low number of accessible, ice-free landing sites and the absence of docking facilities or jetties in the Antarctic, there is a great pressure on space and tourists compete with penguins, seals or flora for these ice- and snow-free sites (Johnston 2006, p. 45; Scott 2001, p. 969). Besides, in the poorly charted Southern Ocean and

given the fragility of the Antarctic ecosystem, any mishap could have severe consequences (Joyner 2007; Hall 1992, p. 6).

Hall (1992) thoroughly analysed potential environmental impacts of various modes of Antarctic tourism (overflights, ship-based tourism and land-based tourism) and concluded that land-based tourism would have the most disastrous consequences. Ship-based tourism would have transient environmental impacts only – with the potential exception of frequently visited landing sites (Kriwoken & Rootes 2000, p. 140) – and overflights would cause noise disturbance and fallout from engines (Hall 1992, p. 6).

Hall & Johnston (1995) and Kriwoken & Rootes (2000) agree that land-based activities such as skiing, hiking, parachuting, or climbing are prone to result in more severe environmental impacts. These impacts comprise, for instance, the degradation of frequently used sites through trampling, waste disposal, water pollution, the introduction of alien species²⁹, souvenir collection, or noise disturbance of bird colonies (Kriwoken & Rootes 2000, p. 141; Hall & Johnston 1995).³⁰

Mason & Legg (1999, pp. 77–78) distinguish between physical impacts on the Antarctic environment, ecological impacts on flora and fauna with special emphasis on behavioural changes, impacts on cultural values (especially on historical monuments such as the huts), as well as social impacts on scientific activities, research sites and on the tourists themselves. With the addition of economic and political impacts, these regional adverse impacts caused by Antarctic tourism are presented in Table 3.5.1. Physical and ecological impacts are combined into environmental impacts, as a clear delineation between the two is often very difficult.

Table 3.5.1: Typology of adverse regional Antarctic tourism impacts

Types	Examples	References
Environmental impacts	<ul style="list-style-type: none"> - disturbance of wildlife resulting in modifications of their behaviour or diminishing numbers of breeding bird colonies - littering/waste disposal - trampling of flora and fauna - the development of footpaths and soil erosion and compaction - introduction of diseases or alien species (e.g. through ballast water) - marine pollution (e.g. fuel spills) - air pollution through ship and small-boat operations - noise pollution 	Bastmeijer & Roura (2004, p. 767); Pfeiffer & Peter (2004, p. 345); Tracey (2001, p. 121); Hofman & Jatko (2000); Kriwoken & Rootes (2000, p. 140); Mason & Legg (2000, p. 360); Dingwall & Cessford (1996, p. 65); Hall (1992, p. 6)

²⁹ The possibility of non-anthropogenic introduction of alien species, e.g. through migratory birds, has to be considered as well.

³⁰ Here, it has to be considered where land-based tourism takes place. Many mountaineering activities, for instance, occur in locations away from more sensitive coastal areas that represent breeding sites for wildlife, and would consequently, if conducted in an environmentally sound and sensible manner, have less impact on the Antarctic environment than ship-borne tourism. According to Taylor (pers. comm. 2008), ship-based tourism could cause the most severe impacts on the environment as incidents such as groundings, collisions or sinking entail a high potential for environmental degradation and as tourists partaking in ship-based itineraries visit the more sensitive coastal areas.

Types	Examples	References
Social impacts	<ul style="list-style-type: none"> - disruption of research activities and the potential danger to unmarked sites of scientific interest - need of bases and NAPs to come to the rescue of expeditioners in distress - impacts of crowding or growing numbers of tourists at a limited number of landing sites on the tourists themselves and how they perceive the Antarctic continent - interference with the activities of other stakeholders 	Bastmeijer & Roura (2004, p. 767); Kriwoken & Rootes (2000, p. 140); Mason & Legg (1999, p. 77–78); Splettstoesser (1999, p. 141–142) Dingwall & Cessford (1996, p. 65); Hall (1992, p. 4); Beck (1990, p. 350)
Cultural impacts	<ul style="list-style-type: none"> - internal climate of buildings may be altered - damage to or appropriation of historical artefacts - transportation of material on boots (snow/ice/rocks) into historic huts - detrimental effects on Antarctic wilderness values 	Bastmeijer & Roura (2004, p. 767); Tracey (2001, p. 122); Kriwoken & Rootes (2000, p. 140); Dingwall & Cessford (1996, p. 65); Hughes & Davis (1995)
Economic impacts	<ul style="list-style-type: none"> - costs incurred by NAPs in case they have to participate in search and rescue operations - no indigenous people are there to benefit from tourism 	Snyder (2007a, p. 17)
Political impacts	<ul style="list-style-type: none"> - opening new avenues for international dispute - threat to the stability of the ATS - re-animating questions of sovereignty and territorial claims 	ASOC (2007d, p. 5); Enzenbacher (2007)

Table 3.5.1 presents the adverse impacts that Antarctic tourism might have on the Antarctic and its stakeholders – in a geophysical, socio-cultural or geopolitical sense. The global implications of Antarctic tourism have not been considered. An important point raised by Bastmeijer & Roura (2004, p. 767) refers to the indirect and possibly global environmental impacts of long-haul transport to the Antarctic as part of tourism operations in this region, which has not received sufficient attention so far. The contribution of Antarctic tourism to global climate change is currently being researched by Lamers & Amelung (pers. comm. 2007).

The adverse impacts presented in Table 3.5.1 are of a speculative character as so far, there has not been sufficient monitoring of or research into tourism impacts to cite empirical evidence (Tracey 2001). In recent years, there have been tentative efforts to build up a more solid base of knowledge surrounding the impact of human presence or human activity on wildlife. A small selection of studies focusing on these aspects is presented in the following section.

3.5.1 Monitoring of environmental impacts

A study conducted by (Pfeiffer & Peter 2004) investigated bird behaviour, population dynamics and physiological effects of tourist visits on Southern Giant Petrels at a tourist landing site on Penguin Island, South Shetland Islands. The study concluded that the currently enforced minimum separation distance from tourists to wildlife should be adjusted to 50 m, and that the Western shore should be closed off to tourism in order to protect some of the more sensitive breeding sites. It was further suggested that a tourist path be used to avoid the random wandering of numerous small groups of tourists, which results in repeated and frequent disruptions for the birds (Pfeiffer & Peter 2004, pp. 350–351). Pfeiffer & Peter (2004) conclude that their study results are also applicable to other Antarctic sites

such as Hannah Point or other sites on the Fildes Peninsula or King George Island, where consequently the minimal distance to wildlife should be increased in the same manner (Pfeiffer & Peter 2004, p. 350).

Frenot *et al.* (2005) completed a comprehensive analysis of alien flora and fauna in the Antarctic and Sub-Antarctic. They concluded that “[t]he biota of most sub-Antarctic islands and some maritime and continental Antarctic ice-free areas include alien taxa” (Frenot *et al.* 2005, p. 62) with the current trends of climate change and global warming enhancing the introduction of alien species (Frenot *et al.* 2005, p. 63). Frenot *et al.* (2005, p. 62) argue that the introduction of alien taxa has been limited to the last two centuries during which first sealers and whalers, and then NAPs and commercial activities such as tourism brought the species in. Monitoring programmes have to be established to avoid further introduction and inter-island transfer of alien taxa in the Antarctic through propagules attached to food, clothing, cargo and transport vessels themselves (Frenot *et al.* 2005, p. 63).

A team of Swedish researchers has recently screened six penguin colonies in the Antarctic Peninsula frequently visited by tourists for human-associated bacterial pathogens (Bonnedahl *et al.* 2005). No trace of pathogens could be found indicating that so far the tour operators have been successful in avoiding the transport of bacterial pathogens into the Antarctic region (Bonnedahl *et al.* 2005). According to Bonnedahl *et al.* (2005, p. 432) the only few cases of an introduction of human bacterial pathogens they are aware of occurred around research bases.

Although it has been established that visitation by tourists has a far lesser impact on the Antarctic fauna than activities that accompany science, such as the running of stations or conducting scientific research (Pfeiffer & Peter 2004, p. 345; Copley *et al.* 2000; Headland 1994; Tangle 1988), monitoring of tourism impacts is necessary (Pfeiffer & Peter 2004, p. 345). The latter is the case as “tourism has opened up new landing sites in close proximity to wildlife and work areas, where governmental and non-governmental activities overlap” (Pfeiffer & Peter 2004, p. 345).

3.5.2 Critical voices

Various researchers analysed the theoretical validity of the argument that tourism should be rigorously regulated, if not strictly limited, based on its potential environmental impact by comparing the latter to the impact of other human activities in Antarctica. Generally, according to Dingwall & Cessford (1996, p. 65) “the environmental impact [of Antarctic tourism] has been largely benign”, due to the care taken by tour operators and tourists themselves. In 1992, Enzenbacher (1992b) stated that the number of scientists and support personnel of national programmes stationed in Antarctica averages 4,000 in the summer season. According to Stewart *et al.* (2006, p. 196), this number has been relatively stable since the 1990s. As tourists are said to spend only about 0.5% of their time in Antarctica on land, Spletstoesser (2000) and Stewart *et al.* (2006, p. 196) argue that in comparison to the impact of national programmes, the impact of tourism may be limited.

As observed by Riffenburgh (1998) during his Antarctic cruises, the blame put on Antarctic tourism for its environmental impact is disproportionate to its actual impacts, particularly when compared to the impacts caused by science support and governmental activities. Riffenburgh (1998) argues that three major aspects regarding environmental

impacts originating from tourist activities have to be considered: the degree of environmental damage caused, the “issue of comparative control” (Riffenburgh 1998, p. 193), and supervision. With respect to the degree of environmental damage it is worth acknowledging that man-hours spent by scientists and support personnel on the Antarctic continent significantly outnumber man-hours spent by tourists in Antarctica (Riffenburgh 1998, p. 193). Further, whereas scientists have almost unlimited access to all areas of the continent (Riffenburgh 1998, p. 193), tourists seldom venture far from the landing sites. ‘Comparative control’ over tourists as issued by tour operators through the subscription to specific passenger guidelines (Recommendation XVIII-1) represents “the only true visitor management strategies employed in Antarctica” (Riffenburgh 1998, p. 193). By comparison, station personnel “have not had such a specific set of established rules, although they have been expected to be in compliance with the requirements of the Protocol ... and national legislation” (Riffenburgh 1998, p. 193). Riffenburgh (1998) reports incidents he observed in the Antarctic, where members of government programmes infringed Recommendation XVIII-1 provisions and concludes that it was this lack of control, which often left tourists confused as to what was the appropriate behaviour (Riffenburgh 1998). Finally, supervision is much stricter and more apparent for tourists – with the expedition staff monitoring and policing the tourists – than for support and military personnel (Riffenburgh 1998). According to Riffenburgh (1998), the support and military personnel do not generally seem to receive the same amount of information on flora and fauna, geology, history and guidelines on conduct ashore as tourists do.

The above arguments show that when viewed in relation to other human activities, such as Antarctic science, environmental impacts through Antarctic tourism are relatively limited and more likely minuscule. However, these points have to be taken with considerable caution, for a number of reasons. Firstly, science is firmly embedded in the Antarctic Treaty (AT), which is not the case for tourism. Secondly, neither is the full extent of potential cumulative impacts of Antarctic tourism known nor have political and cultural impacts through tourism been adequately taken into consideration. Thirdly, it has not been established what toll further increases in tourism numbers, more intense land-based tourism and a greater density of tourist vessels in Antarctic waters will have on the environment. However, as it is not the goal of this thesis to analyse tourism impacts on the Antarctic environment (see Table 3.5.1), this issue – whilst being acknowledged as a challenge for tourism management – shall not be discussed any further³¹. Rather, it is important here to focus on regulatory challenges in terms of tour operator practice and compliance in order to assess the success and effectiveness of existing regulatory mechanisms as well as to derive suggestions for future regulatory options.

³¹ Indeed, more substantial and long-term research is called for to facilitate sound conclusions about the impacts of tourism on the Antarctic environment and the carrying capacity of specific landing sites (Bertram & Stonehouse 2007). In general, issues of carrying capacity are, for instance, discussed by Prosser (1998), who defines carrying capacity as “the amount of use a destination can take without deteriorating” (Prosser 1998, p. 391). For Antarctic sites, estimates of carrying capacity do not yet seem to have been determined (Bertram & Stonehouse 2007, pp. 295–296).

3.6 Self-organisation of Antarctic tourism

IAATO is an industry group that has resolved to set the highest possible tourism operating standards in its effort to protect Antarctica. This effort is unique, and the challenge to maintain environmentally responsible tourism exists to this extent in no other region of the world. (Landau n.d.)

The regulatory framework for Antarctic tourism is partially defined by self-regulatory efforts of Antarctica tour operators, who, through IAATO, impose stringent guidelines regarding how tour operations are to be run in Antarctica upon the organisation's member companies. In 1991, seven US-based tour operators founded IAATO in an attempt to develop a more coordinated and informed approach to providing responsible, safe and environmentally sound travel to Antarctica (IAATO 2006c; Splettstoesser 2000). As cited in Haase *et al.* (submitted), an additional reason for the creation of IAATO was the 'friendly threat' posed by the US National Science Foundation (NSF) urging US-American tour operators to assume a more proactive and united approach to conducting and managing Antarctic tourism.

There are various sources of motivation for tour operators to join forces under the umbrella of IAATO. Aside from maintaining a reputation of good practice due to IAATO's extensive operating codes of conduct (see Appendix 7) and guidelines, IAATO allows for strategic planning and a collective proactive influence in policy-making through ATCPs (Murray & Jabour 2004; Herr 1996). It provides tour operators with the opportunity to be one step ahead and prevent more restrictive policies through the ATS being implemented (Richardson 1999, p. 10). Furthermore, IAATO provides a single point of contact to the tourism industry and increases the lobbying power of Antarctic tour operators (Taylor, pers. comm. 2008). Finally, the wish to keep environmental standards up (Richardson 1999, p. 10), self-interest and a love of the Antarctic contribute to the appeal an IAATO membership has to operators as well (Haase *et al.* 2007). The latter will be elaborated on in greater depth in Chapter 5.

The following quotation taken from the IAATO Membership Application form illustrates the mission, the basic goals and characteristics of IAATO:

As a member driven organization we collectively address political, environmental, regulatory, and operational procedures. We are here to assist and work with our member companies to develop the safest and most environmentally sound operations possible. IAATO is committed to protecting Antarctica and its dependent and associated ecosystems. Working together as a group of operators is the most effective way to ensure that we can protect one of the greatest wilderness areas on earth. Our member companies have years of experience in the development and implementation of best practices. (Landau 2006, p. 1)

Over the last 16 years, IAATO has grown from a small US-based association to a sizable international "industry group that has resolved to set the highest possible tourism operating standards in its effort to protect Antarctica" (Landau 2007). As an industry group, it consists of organisers or supporters of tourism to the Antarctic with a commercial interest comprising "ship operators, land-based operators, ship agents, travel agents, one government office and travel companies that charter ships and airplanes from existing operators" (Landau 2007). Small independent and non-commercial expeditions are largely excluded.

Table 3.6.1: IAATO membership types and membership categories

Focus	Provisional	Full	Associate	Total
Ship-based <200 passengers (Category 1)	12	27	13	52
Ship-based 200–500 passengers (Category 2)	0	6	0	6
Ship-based >500 passengers (Category 3)	3	3	0	6
Land-based tourism	1	1	0	2
Air/cruise	0	1	0	1
Over-flights	0	0	1	1
Support (travel agents/travel companies)	0	0	17	17
Support (logistics, e.g. port agents)	0	0	7	7
Support (promoting tourism)	0	0	4	4
Other support (education, conservation, expedition planning)	1	0	5	6
Total	17	38	47	102

Source: IAATO (2008a)

According to IAATO bylaws, there are four different states of membership within IAATO: full members, provisional members, associate members and probational members (IAATO 2006b). Provisional membership represents the first step on the ladder to becoming a full member with voting rights. In order to apply for provisional membership, companies need to be sponsored by a full member that endorses their application and recommends them for provisional membership status within IAATO (Landau 2006). To become full members, provisional members must not only fully comply with IAATO bylaws and guidelines, but have their operations approved of by an independent observer³². Associate membership implies full voting rights but does not allow members to operate their own travel programmes. For any non-compliance with the bylaws, members can be put on probation by majority decision of the membership body. Probational members lose their voting rights whilst maintaining any other duties and responsibilities of members in good standing. Probational members have to go through the same process as provisional members to regain their full or associate membership status (IAATO 2006b).

As illustrated in Table 3.6.1, the membership body can be further broken down by means of transport during the main part of the trip into the following categories: ship-based operators with or without landings, land-based operators, operators of overflights with or without landings, and air-cruise operators. Additionally, a classification by size of operation is applicable to ship-based tour operators as already mentioned in Table 3.4.1. Once again, small operators (< 200 passengers or Category 1), medium-sized operators (200-500 passengers or Category 2)³³, and large (> 500 passengers or Category 3) can be distinguished. Large operators are automatically cruise-only operators as IAATO guidelines do not allow vessels carrying more than 500 passengers to engage in landings (IAATO 2006b).

³² An observer does not have to be taken along on sailing vessels with a capacity of less than 12 passengers (Landau 2006).

³³ Aiming at being inclusive, IAATO has adapted to the changing nature of the Antarctic tourism industry by increasing the passenger limit per vessel to Antarctica for those operators that include landings in their itineraries from originally 400, to 500 passengers, in order to allow larger ship operators to join (Bastmeijer & Roura 2004, p. 777).

3.6.1 Procedural considerations regarding self-organisation

In their paper, Haase *et al.* (submitted) argue that self-regulation and self-organisation within IAATO works on two levels – on an administrative/policy level and on an operational level. The administrative/policy level incorporates, annual general meetings, work in standing committees to prepare and facilitate decision-making processes, and administrative and representative tasks which are primarily dealt with through the IAATO secretariat. The operational level relates to the application of ethos to practice. In the field, daily communication amongst vessels to schedule and coordinate their activities is of the utmost importance (Respondent O6, pers. comm. 2006). Daily communication between vessels is conducted in accordance with the ‘laws of courtesy’ and the vessels’ pre-registered itineraries. Tourists are ‘managed’ through briefings and debriefings, through reiterating the importance of environmentally sound behaviour, through a high guide–passenger ratio (of at least 1:20), and through the encouragement of self-policing amongst passengers. Each IAATO member is required to stringently follow suggestions put forth in IAATO’s codes of conduct, which aim at ‘guiding’ behaviour by providing instructions or advice (IAATO 2006b & 2007d; Mason & Legg 1999, p. 80), and IAATO’s guidelines, which provide the reasoning behind the codes of conduct (Mason & Legg 1999, p. 80)³⁴.

In fact, IAATO has been commended for promoting the Protocol, which is of significance for IAATO members based in non-signatory states, and for having developed guidelines and codes of conduct that exceed Protocol provisions, such as guidelines on boot washing, on watching marine wildlife or requiring a staff-to-passenger ratio of at least 1:20 during landings (Bastmeijer & Roura 2004, p. 777).

Although it has been lamented that IAATO guidelines are not compulsory (Mason & Legg 1999, p. 80), compliance with the guidelines is generally excellent as shown in Chapters 5, 6 and 7. Examples of some prominent guidelines are, for instance, the requirement to limit the number of passengers ashore during any one landing to 100, general codes of conduct in the vicinity of wildlife, that advance notice of 72 hours be given to stations scheduled to be visited, and that the boots be cleaned and disinfected properly before each landing (IAATO 2006b & 2007d).

In order to determine a suitable disinfectant, IAATO closely worked with researchers and followed their advice on using the specific disinfectant Virkon S. Curry *et al.* (2005) conducted a study assessing the efficacy of IAATO boot-washing procedures in the Ross Sea during the 2000/01 season. They tested the chemical disinfectant Virkon S, which is “effective against bacteria, viruses, and yeasts when used as a 1% solution” (Curry *et al.* 2005, p. 43). Curry *et al.* (2005) concluded that Virkon S was a suitable disinfectant for use on tourist ships in the Antarctic as it was very effective against bacteria even at low temperatures, was easy to transport and use, had lower toxicity than other disinfectants, and lost its colour when losing its activity.

³⁴ “[C]odes of conduct (...) usually lack the authority of regulations” (Mason & Legg, 1999, p. 80, based on Mason, 1997). Regulations imply that any of the requirements they state is legally imposable and incompliance can be sanctioned (Mason & Legg, 1999, p. 80, based on Johnston & Mason, 1997).

During Annual General Meetings (AGMs), decisions and policies discussed include the decisions on membership status or updates made, the scheduling of activities according to the *one ship, one place, one moment* principle³⁵, and the pro-active development and review of policies and guidelines. Committee work provides the basis for informed decision-making during the AGMs and relieves some of the workload of the executive office. The actual process of self-regulation is achieved through guidelines that were developed from best practices and through peer pressure (a point that will be elaborated on in Chapter 5).

It has been argued that tour operators have embraced an important role as *in situ* regulators and will represent key players in future tourism management (Beck 1994, p. 384). However, with the growth of tourism and an increasing complexity of the political and regulatory situation in Antarctica, this view is increasingly being questioned (see, for instance, Enzenbacher 2007; Molenaar 2005; Bastmeijer & Roura 2004; Hemmings & Roura 2003). Although IAATO's contribution is generally well-respected, "an increasing number of [C]onsultative [P]arties question whether the Antarctic environment can be adequately protected through self-regulation" (Bastmeijer & Roura 2004, p. 775).

According to Bastmeijer & Roura (2004, p. 781), there are limitations to what self-regulation can deal with because of the economic imperative: the self-interest of tour operators to run economically viable operations.

However, whatever the industry's demonstrable concerns as regards minimizing environmental damage, plainly tour operators have to operate profitably in Antarctica. According to our observations, most measures that have been adopted by the tourism industry should also be characterized as *conditions* to engaging in Antarctic tourist activities, conditions that do not substantially restrict Antarctic tourism initiatives. (Bastmeijer & Roura 2004, p. 777; emphasis by original authors)

Bastmeijer & Roura (2004, p. 774) argue that some ATCPs view the mere existence of a self-regulatory association as reason enough to put off debates about the management of Antarctic tourism. This issue will be revisited in Chapter 6 and shall not be detailed at this point.

3.6.2 Non-IAATO Antarctic tourism operators

Two US-based large-ship operators (Discovery World Cruises and Orient Lines/Norwegian Cruise Line), both running traditional cruises with more than 500 passengers³⁶ in the Antarctic, are excluded from IAATO membership by default. Despite being classed as large-ship operators, they include landings in their itineraries. Otherwise, the segment of IAATO outsiders mostly consists of small, independent expeditioners or yacht operators who organise commercial trips to the Antarctic with their own or chartered yachts. Examples of yacht owner-operators include the *Spirit of Sydney*, an Australia-based expedition support yacht, and the *Philos*, a 5-person yacht operated by Philos Expeditions from Switzerland. Charter yachts or vessels contain, for instance, the *Polar Pioneer*, a Russian-flagged 54-berth expedition vessel for charter through the Spanish company InterYachtCharter, and the *Tiama*, a charter yacht

³⁵ According to this principle, site-specific guidelines are to be complied with and no vessel is to interfere with the landings arranged by other vessels. A web-based ship scheduler is used to coordinate landings and avoid overlaps. On a first-come, first-serve basis operators enter their schedules online and landings are allotted according to site guidelines. The scheduler takes non-members into consideration; non-IAATO large-ship operators are especially urged to enter their schedule as well.

³⁶ In 2004/5, IAATO non-member Oceania Cruises operated a large vessel (669 passengers), the *Insignia*, on a single cruise to the Antarctic (see Molenaar 2005, p. 34). Oceania Cruises scheduled another visit to the Antarctic Peninsula with 800 passengers as a cruise-only trip on board the *Insignia* in the 2007/08 season (IAATO 2007a).

owned and operated by Waterline Yachts, New Zealand. Private ship-based adventure tourism operators like the Australian company Southern Sea Ventures offer Polar sea kayak tours and occasionally include the Antarctic in their catalogue. In terms of land-based adventure tourism, organisations such as Adventure Consultants, a New Zealand based company, and the Canadian West Mountain School, a mountaineering and climbing operator, are active non-IAATO operators in Antarctica³⁷.

The aforementioned cases represent merely a few examples of a greater range of small organisers of Polar expeditions. Often, these organisers only sporadically visit the Antarctic without widely advertising their trip, and some of them do not keep very detailed records about their operations. As the purpose of this thesis is not the analysis of small, independent tourism operators or private expeditioners in the Antarctic, the reader is referred to Murray & Jabour (2004) and Lamers *et al.* (2007) for a more comprehensive analysis of adventure tourism in the Antarctic and independent and private expeditions.

Although occasionally referred to as rogue operators, this term could only be applied to non-IAATO operators if IAATO membership was legally required for organisers of Antarctic tourism. A voluntary IAATO membership implies that no automatic denunciation can be attached to not being a member. It is suggested that, alternatively, the term 'rogue operator' could be applicable to tour operators that are legally obliged to, but do not comply with AT provisions implemented by their national governments.

The two large companies – Orient Lines/Norwegian Cruise Line and Discovery World Cruises – operating outside IAATO provided altogether 12 voyages to the Antarctic Peninsula region (M/V *Discovery*³⁸: 7 trips; M/S *Marco Polo*: 5 trips³⁹) during the 2007/8 season. Both companies respect IAATO guidelines and codes of conduct, with the exception of the rule not to have vessels with more than 500 passengers engage in landings. However, for the last few seasons, the *Marco Polo* complied with this passenger limit. Otherwise, they would not have been able to conduct landings at Jougla Point, Wiencke Island, as the site-specific guidelines for this site limit landings to ships carrying not more than 500 passengers. Both companies have experienced expedition leaders who have been involved in Antarctic tour operators for a number of years, and Orient Lines/Norwegian Cruise Line has had a representative attending IAATO meetings for a number of years.

³⁷ Here, it has to be noted that many of the land-based operators subcontract ANI/ALE, an IAATO member, to operate their Antarctic expeditions.

³⁸ According to Taylor (pers. comm. 2008), Discovery World Cruises now plan to apply for IAATO membership.

³⁹ The M/S *Marco Polo* changed ownership in March 2008. It is now owned by the Greek company 'Global Cruises', although the German company 'Transocean Tours' charters the vessel for the next five years with the intention of taking it to the Antarctic and Greenland. Transocean Tours was approved as a provisional IAATO member as of mid-February 2008.

3.7 Concluding thoughts

No ship is immune to dangers at sea, but in many ways a big, well-equipped modern liner is safer for its passengers than a small one. Whether it is ice-strengthened is neither here nor there: dozens of ships that are not ice-strengthened operate every year in ice-strewn waters. What matters is how the ship is handled, and I would trust the master of a big cruise liner – backed by an experienced ice captain – to know his job very thoroughly. (Stonehouse as cited in Nicholls 2008, p. 49)

At this point, the most important aspects of Antarctic tourism development and characteristics shall be reiterated: The majority of Antarctic tourism is ship-based and operates itineraries to the Antarctic Peninsula. So far, ship-based tourism still employs environmentally conscientious patterns of expedition-style cruising, which became known as the Lindblad pattern and had been designed around 1970 by Lars-Eric Lindblad. However, Antarctic tourism has grown in scale and variety over the last few years, a development that has raised concern among ATPs and representatives of environmental NGOs. Increasing numbers of larger vessels cruise in Antarctic waters, some of which are not members of IAATO. The question arises whether IAATO has the capacity to regulate Antarctic tourism effectively under consideration of these developments in the future. Can the hands-off approach to tourism regulation through ATCPs be maintained in the future and if not, what changes need to be made? Is the current regulatory system flexible enough to react to new developments in the Antarctic tourism sector in a timely fashion? These questions are very difficult to address, but have to be asked in an attempt to assess the capacity of the current regime to regulate Antarctic tourism effectively. The following chapters intend to shed some light on the issues underlying these questions in order to develop an informed response, which will be presented in Chapter 7, and hence contribute to the advancement of knowledge in the area of stakeholder perspectives on Antarctic tourism ethos, practice and regulatory options. These stakeholder perspectives enrich an assessment of the effectiveness of the regulatory regime for Antarctic tourism.

CHAPTER 4



4 Setting the scenes: introducing the framework of analysis

The issues surrounding ownership, control, authority and intrusion are nowhere more vividly demonstrated than in Antarctica. (Prosser 1995, p. 112)

As noted in Chapter 1, Antarctic tourism is a highly complex issue involving a region governed by an intricate regulatory regime. Chapter 1 explained that Antarctic tourism cannot be analysed as a detached and discrete entity but has to be considered as part of an interwoven and multifaceted network of stakeholders and matters that goes beyond the process of conducting and regulating tourism to the Antarctic.

The aim of this Chapter is primarily to position this thesis research with regard to current theory, literature and peripheral issues that inform this research or influence decision-making for Antarctic tourism regulation. The reader is introduced to issues that are of relevance for the research subject, in particular the regional context surrounding the research and the concept of regime effectiveness. First, this Chapter gives an overview of the regional context Antarctic tourism functions in. Then, the ATS is introduced in greater depth and the cornerstones of the current regulatory regime for Antarctic tourism and its challenges are outlined.

4.1 *Antarctic tourism in the regional and global context – an overview of its complexity*

Alone of all the continents, Antarctica is a genuine 'wilderness', nurturing no established indigenous peoples with communal or individual rights. (Prosser 1995, p. 113)

Numerous times has it been recited that Antarctica is “the coldest, driest, windiest, iciest, most isolated, most extreme, most unpolluted, most fragile, and most infertile of the Earth’s seven continents” (Polk 1998, p. 1395). Equally well-known is the fact that 98% of Antarctica is covered with ice (Mason & Legg 1999, p. 71) and that most of the ice-free areas are coastal sites, which are favoured by wildlife as breeding sites and by humans as tourism landing sites and acceptable locations for stations alike (Cessford 1997). The physical and biological characteristics of Antarctica are thoroughly described in a number of publications and shall not be recounted in this Chapter. The interested reader is referred to Rubin (2005) and McGonigal & Woodworth (2002), to name just two examples.

4.1.1 **Factors steering Antarctic tourism regulation**

What is more important to mention at this point is the value of Antarctica as a (relatively) pristine wilderness (Herber 2007, p. 28; Polk 1998, p. 1395; Clark & Perry 1996, p. 295; Hall 1992, p. 5), which is, according to Sessions (1992), enough to necessitate the protection of the area. Polk (1998, pp. 1402–1403) supports this argument and states that the preservation of Antarctica is of importance, not only because of the scientific value of the continent, but essentially because of its inherent, intrinsic wilderness value as one of the last remaining places in the world that is largely undisturbed (Stokke & Vidas 1996). However, it has to be acknowledged that the idea of preserving Antarctica because of its value for science is not without controversies. In his analysis of wilderness preservation arguments, Nelson (2003) realises the potential paradox that an argument reasoning that wilderness areas should be preserved because of their scientific value encompasses. Preservation for science inevitably implies use of the area

by humans (scientists), which renders the preservation argument ineffective as usage could potentially threaten or destroy the wilderness area (Nelson 2003, p. 421). Nelson (2003) joins Sessions (1992) in arguing that the mere existence of wilderness should be reason enough to preserve it, placing the intrinsic value of wilderness on the forefront of preservation arguments.

So far, Antarctica's isolation and extreme climate have acted in its favour with respect to maintaining a wilderness region (Polk 1998, p. 1395). However, "Antarctica is decreasingly protected by its inaccessibility in terms of time, cost, distance or even comfort" (Prosser 1995, p. 119) and has had commercial activities such as fishing, tourism, bio-prospecting and support activities mount pressures on the continent (Hemmings 2004a, p. 6). Furthermore, like no other continent, Antarctica epitomises the clash of a conservation imperative with the human utilisation of resources as well as the controversy of 'frozen', yet existing, sovereignty claims with Common Heritage of Mankind (CHM) principles (Bunyard 1991, p. 17).

When discussing the regulation of Antarctic tourism, the aforementioned matters that essentially represent a conservation ideal, which is coming under increasing pressure from commercial activities, have to be kept in mind. They steer the direction lobbying by environmental NGOs takes and determine the framework within which regulatory mechanisms can be designed such that they would be considered acceptable to the majority of the regulators. As stated in the introduction, a conservation imperative is not only the underlying supposition assumed by the researcher but it is also reflected in the literature (see e.g. Herber 2007; Bertram 2005; Riddle 2000; Polk 1998) and by the study participants themselves (see Chapters 5 and 6). The concern that Antarctic tourism may endanger the conservation imperative drives and politicises the Antarctic tourism debate, and is consequently of importance when analysing which characteristics an effective regulatory regime for Antarctic tourism might display.

4.1.2 Factors complicating Antarctic tourism regulation

The fact that Antarctica is a "sovereignless land" (Polk 1998, p. 1395), i.e. that no nation holds ownership of Antarctica (Mason & Legg 1999, p. 71) if ownership is to be defined as internationally accepted, jurisdictional sovereignty (Prosser 1995, p. 114), enflames and steers ownership–stewardship and tourism–conservation debates (Prosser 1998, p. 399). Unresolved sovereignty issues in the Antarctic are a source of jurisdictional challenges and problems regarding the regulation of commercial activities (Enzenbacher 2007; Beck 1990, p. 351) as well as general human activities in Antarctica.

As argued by Murray & Jabour (2004), human utilisation of Antarctica is dominated by two main and influential groups: national science programmes and IAATO. Aside from these two groups, independent travellers and expeditions visiting Antarctica are regarded as another actor in the region, but one that has repeatedly received criticism from national science programmes and IAATO (Murray & Jabour 2004, p. 309). Mason & Legg (1999, p. 72) go further and claim that human usage of Antarctica is dictated by scientific activity and that scientists can effectively be referred to as "semipermanent residents of Antarctica" (Mason & Legg 1999, p. 77).

Science in Antarctica is declared a designated activity by the Antarctic Treaty and is firmly established within the ATS. During the drafting of the Antarctic Treaty in 1959, tourism was not envisioned ever to play a major role in Antarctica. Therefore, tourism now, after having grown out of its infancy, constitutes a 'problem' that tests the flexibility and effectiveness of the Treaty regime.

Viewed against the background of Antarctica as an international commons (Buck 1998, p. 6), the decision-making regarding governmental activities of a small elite group of nations and non-governmental activities of a larger pool of actors, represents a complex and delicate balancing act.

Antarctica ... is a mirror to mankind's complex mixture of nobility and frailty. On the one hand there is a burgeoning acknowledgement that the 'global commons' and stewardship philosophy is the way ahead. There is an awareness, too, that this may be the last chance we have to prove to ourselves whether we possess the will to change our approach from 'it's mine' to 'it's ours'. ... On the other hand, there is a deeply embedded reluctance to relinquish power and prospects and so to abandon the individual ownership paradigm. Perhaps, too, there is an amalgam of fear and distrust – the 'I will if you will' stand-off at a national scale! (Prosser 1995, pp. 119–120)

The powerful 'ownership' debate surrounding Antarctica is of relevance to the regulation of Antarctic tourism as Antarctic tourism is seen by some nations as a means to substantiate sovereignty claims and to contribute to financing their presence in Antarctica (Enzenbacher 2007). Antarctic tourism is one of the prominent issues during ATCMs, over which opinions are controversial and conflicting. Not without reason is Antarctic tourism regarded as posing a threat to the stability of the Treaty regime (Hemmings, pers. comm. 6 April 2005). Viewed against the controversy and power plays surrounding Antarctic tourism, its effective regulation is complicated by diverging interests and the difficulties of reaching consensus.

4.1.3 The 'Question of Antarctica'

Upon consideration of Antarctica's status as an international commons, the reluctance to relinquish power along with the need to protect the Antarctic environment complicates the regulation of human activities in Antarctica. In the past, the commons status of Antarctica has resulted in pressure being imposed on ATPs and the UN by Third Party states to make Antarctica more accessible and utilisable by these non-member countries.

A number of proposals have been made to the UN regarding issues such as "the desirability of broader involvement [of Third Party states], greater UN involvement [in Antarctic governance], UN support for an Antarctic world park, ... mineral exploitation issues, and the growth in tourism requiring regulation" (Tracey 2001, pp. 194–195), just to name a few. If Antarctica was to become a world park and governed by the UN as suggested by, for instance, Foreman (1991–1992, p. 865), the claimant status of seven countries to parts of Antarctica would have to be revoked⁴⁰.

⁴⁰ Foreman (1991–1992) argues that "[t]he claimant nations, although required to pool their claims would not surrender their interests to any one nation, but rather, maintain an interest which is shared by the global community" (Foreman 1991–1992, p. 879). Lee (2005) likewise calls for a world government for Antarctica on the basis that the ATS would not be capable of dealing with new challenges such as a rapidly increasing tourism industry because of weaknesses in enforcement. He states that "the successful past [of the ATS] could become a hurdle for reform" (Lee 2005, p. 93). Under a world government, ATPs would be required to give up their sovereignty completely and consensus would not be necessary for decisions to be made, all of which essentially coincides with the notion of the death of the nation state (Lee 2005).

In the same vein, the CHM, or *res communes humanitatus*, principle has been advocated in a UN forum (Herber 2007, p. 29; Buck 1998; Peterson 1988; Vicuña 1988). The CHM principle maintains that some common-pool resources such as Antarctica are owned by all of mankind. This implies that individual states cannot legally claim appropriation over Antarctic resources as the 'community' of mankind already holds the property rights (Herber 2007, p. 29; Buck 1998, p. 28). Consequently, all benefits extracted from these resources have to be fairly distributed among all nations independent of a state's contribution towards the utilisation or extraction of the resources (Buck 1998, p. 29).

Despite placing additional pressure on the ATS at the time the CHM proposal was brought forth, the enactment of the Protocol, the rejection of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) and the expansion of the membership body of the ATS have helped resolve the tensions in the meantime (Tracey 2001, p. 195; Stokke & Vidas 1996). The surge towards the "redistributive equity connotation of the common heritage of mankind principle has subsided during recent decades" (Herber 2007, p. 29). Further, the voices urging for a UN government of Antarctica and criticism from non-Treaty states quietened when the ATCPs committed to an increasingly environmental conservation imperative in the early 1990s (Stokke & Vidas 1996, p. 436). Similarly, a world park model that had been suggested to the UN in the 1980s and early 1990s was discarded once the Protocol was signed (Herber 2007, p. 29; Tracey 2001, p. 195).

The aforementioned examples have been included in the consideration of Antarctic tourism within a regional and global context because they highlight the imaginativeness of the global community with respect to alternative governance systems for Antarctica. It is this imaginativeness which may well result in different regimes regulating Antarctic tourism in the future. Similar options of alternative regulatory regimes for Antarctic tourism may have to be considered when discussing the effectiveness of Antarctic tourism regulation and outlining alternative regulatory options.

4.1.4 Fuzzy concepts underlying Antarctic tourism regulation

Other issues have developed that now put a burden on the ATS. The rapid growth of tourism and its presumed effects on the environment and on geopolitical stability represent one of these issues. Increasingly, questions about the sustainability of human activities in Antarctica are asked, and the commons status of Antarctica broadens the forum for these questions and moves them into an international arena. By the early 1980s, the World Commission on Environment and Development (WCED) was already discussing the concept of sustainable development⁴¹ and dealt with the question of effective management of the commons. Dealing with the latter, Chapter 10 of the Brundtland Report (WCED 1987), the official report of the WCED, included references to Antarctica and made it clear that the question of participation in governing Antarctica is not polarised between industrial and developing countries and that consequently, the CHM principle does not have profound validity. However, the Brundtland Report did not

⁴¹ By proposing what is now a well-used definition of sustainable development, the Brundtland Report initiated a lively discussion in the academic literature of the meaning of sustainability. The Brundtland Report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987, p. 54). This vague definition of an allegedly universal concept is based on a collection of social values and global principles, which hinge on essentially subjectively defined needs and lack universality (Beckerman 1994, pp. 192–194).

focus on the political and legal status of Antarctica but stressed that the management of the continent should be environmentally responsible and farsighted. The Brundtland Report stated that

[a]s Antarctic activities multiply, sound conservation will also require increased data collection, monitoring, and environmental assessment. The interactive and cumulative effects of these projects must be carefully reviewed and areas of unique scientific and environmental value protected. (WCED 1987, p. 278)

It is interesting to note that as one of the most widely distributed documents on sustainable development, the Brundtland Report does not once mention tourism, one of the industries with globally the highest growth rates (Wall 1997, p. 33).

Considering Antarctica's values as a wilderness and as a bastion for scientific research, any discussion on policy issues and commercial activities is linked to a strong sustainability paradigm. The fact that it has been impossible to evade the term sustainability throughout this thesis, indicates that this research as well as Antarctic governance issues are invariably concerned with the sustainability of Antarctic resources. It has been observed that the term 'sustainability' when used by journalists writing about Antarctic tourism, or by research participants talking about their perspectives on Antarctic tourism, or even when used in the literature or policy discussions, appears to represent a 'buzzword' rather than a commonly understood and clear concept (Mowforth & Munt 2003, pp. 18–20; Holden 2000, p. 173; Beckerman 1994). As pointed out in the introduction, a conservation imperative is assumed in this thesis, which in a technical sense is tied to the concept of sustainability, as the latter can be regarded as something that "can be maintained at a certain rate or level" (Pearsall & Hanks 1998, p. 1870; Beckerman 1994, p. 193).

When regarding sustainability from a political perspective, it becomes clear that power and influence in decision-making are commonly synonymous with determining what kind of values are to be associated with sustainability (Mowforth & Munt 2003, p. 20; Holden 2000; Butler 1998). In the Antarctic context, the impact of the political dimension is not to be underestimated. Policy-making through the ATS drives the scope and type of human activities in Antarctica and, to a considerable extent, defines the course future developments in Antarctica will take. In the Antarctic context as much as elsewhere, sustainability is largely used as a catchphrase that, if it remains open to interpretation and vaguely defined, will lose its power and "suffer the same distortion to which discourses such as 'freedom', 'democracy' and 'development' are commonly subjected" (Mowforth & Munt 2003, p. 113)⁴².

⁴² As a detailed discussion of the concept of sustainability and its ambiguities is not the focus of the thesis, the reader is referred to Howitt (2001) and Nemetz (2007) for an in-depth treatise on sustainability and natural resource management. Tourism and sustainability aspects are discussed in greater length by Mowforth & Munt (2003), Fennell (2003), Sofield (2003), Page & Dowling (2002), McCool & Moisey (2001), Tisdell (2001), Holden (2000), Wahab (1997), among many others. Moreover, an annotated bibliography on the sustainable development of tourism that is a useful source of reference has been published by the WTO (1999).

4.2 Governmental framework: the Antarctic Treaty System

We live in a Mercator world. ... [t]he poleward look from the northern hemisphere sees only an empty ice-covered ocean, while the large continent at the southern end is recognized only as a squiggly line across the bottom of the Mercator map. (Fowler 2000, p. 7)

As shown previously, the Antarctic is characterised by a complex geopolitical environment in which diverging interests meet. Frequently, Antarctica has represented a source of international dispute (Polk 1998, p. 1395). One of the main *raison d'être* of the ATS as “a surrogate governing body to resolve tensions between various institutions that have interests in the continent” (Polk 1998, p. 1395) was to reduce the level of dispute (Guyer & Wyndham 1996). The ATS has been successful in resolving the aforementioned tensions and conflicting political stances by settling the problem regarding the status of Antarctica (Guyer & Wyndham 1996, p. 109; Woolcott 1990).

The AT defines Antarctica as a demilitarised “continent of science” (Rothwell & Davis 1997, p. 5) that “shall be used for peaceful purposes only” (Article I of the 1959 Antarctic Treaty) and freezes the question of sovereignty⁴³ through the provisions of Article IV of the Antarctic Treaty. However, a number of challenges facing the ATS, particularly with regard to commercial activities in Antarctica, remain. Tourism, as outlined in the introduction and the beginning of this Chapter, is one of these commercial activities whose development the ATCPs will have to monitor closely and potentially control with stricter mechanisms than those currently in place.

Regulatory necessities and options, along with their feasibility and desirability, from the viewpoint of Antarctic tourism stakeholders are identified and discussed in this thesis with the aim of assessing the effectiveness of Antarctic tourism regulation. To enable an informed discussion of regulatory mechanisms and their effectiveness, an introduction is necessary to the context within which decision-making takes place and within which governmental policies are primarily rooted. This section outlines the second layer of building blocks – the first one being Antarctic tourism concepts and context – upon which the argument rests: the ATS. An overview is given of the main characteristics of the ATS, with particular emphasis on instruments, agreements or issues pertinent to Antarctic tourism regulation.

4.2.1 The Antarctic Treaty System⁴⁴

The ATS represents a multifaceted collection of agreements between countries with a direct stake in and commitment to Antarctica, developed with the intention of regulating relations and interactions among states in the Antarctic Treaty area, south of 60° S Lat. (Heap 2007, p. 82; Joyner 1994, p. 880). It is a “limited-participation international regime” (Peterson 1998, p. 220) in that the ATS does not represent an “open-access regime” (Buck 1998, p. 67). Membership is limited to states that maintain a presence and research interest in Antarctica, and involvement in decision-making is reserved for ATCPs (Buck 1998).

⁴³ “To postpone a complex settlement of the conflicting claims of sovereignty asserted over the continent, the Treaty freezes the Parties’ claims and provides that no new claims shall be advanced so long as the Treaty is in force” (Polk, 1998, p. 1405).

⁴⁴ The reader will note that this thesis does not provide a detailed account of the history of the Antarctic Treaty System as this would go beyond the scope of this thesis and distract from an assessment of the effectiveness of the current regulatory regime. Readers interested in the history of the ATS are referred to, for instance, Shusterich (1984), Myhre (1986), Herr *et al.* (1990), Chaturvedi (1994), Joyner (1998), Cohen (2002), or Triggs & Riddell (2007).

The Antarctic Treaty System is open to new members joining, and Treaty regulatory mechanisms are designed in such a way that they can be modified and amended (Rothwell & Davis 1997; Foreman 1991–1992, p. 858; Suter 1991, p. 22; Woolcott 1990). These provisions define the ATS as a flexible system (Foreman 1991–1992, p. 858; Suter 1991, p. 22). However, at the same time, the system is weakened by its loose structure (Foreman 1991–1992, p. 858) and by not having a permanent government, as the ATCPs meet only at specified intervals (Foreman 1991–1992, p. 854). In 2004, the Antarctic Treaty Secretariat was established and filled this gap to a certain extent by providing a permanent institution to facilitate functions such as the information exchange between Parties, monitoring of activities, or the preparation of ATCMs, albeit without being authorised with any decision-making power with respect to issuing regulatory acts.

The ATCPs meet sporadically for Special ATCMs, which primarily serve the purpose of conferring on additional ATS instruments, and regularly for ATCMs (Rothwell & Davis 1997, p. 8). Article IX of the Antarctic Treaty requires these regular ATCMs to be held at least every two years, but since 1994, ATCMs have been held annually (Heap 2007; Rothwell & Davis 1997). During the ATCMs, the ATCPs meet to exchange information, discuss Antarctic-related issues of interest and importance to the Parties, and consider, prepare and forward suggestions to their respective governments regarding the governance of the Antarctic continent in agreement with the principles spelled out in the Antarctic Treaty (Heap 2007, p. 83).

The Antarctic Treaty itself is not the result of the urge to preserve the unique Antarctic environment (Polk 1998, p. 1404). In fact, the specific word ‘environment’ does not find single mention in the text of the Antarctic Treaty, which only refers to “the preservation and conservation of living resources in Antarctica” in Article IX (1) (Rothwell & Davis 1997, p. 9; Woolcott 1990, p. 24). Rather, the Treaty represents a reaction to the mounting tensions and imminent threats brought forth by the Cold War, the issue of a variety of sovereignty claims imposed on the continent and the success of international cooperation on the forefront of Antarctic scientific activities during the International Geophysical Year (IGY) (Buck 1998, p. 59; Polk 1998, p. 1404). Hence, as mentioned above, the Treaty advocates science, aiming at securing international scientific cooperation, and peace, declaring the Antarctic a demilitarised zone (Polk 1998, p. 1405).

In order to attain these goals of promoting science and keeping the continent demilitarised and nuclear-free, the Treaty included three important elements of political accommodation (Scully 1990, p. 97). The first of these elements is the aforementioned Article IV, which represents an accommodation between claimant and non-claimant states (Bush 1990, p. 122; Scully 1990, p. 97). The second of these elements is the consensus principle, which underlies decision-making (Scully 1990, p. 97), and the third one refers to the criterion that only those states that conduct research activities in the Antarctic can qualify for consultative status and hence obtain the right to participate in decision-making (Scully 1990, pp. 97–98). These political accommodations provide the basis not only for the existence of the ATS, but also for cooperation among member states and environmental protection in the Antarctic (Scully 1990).

The quasi adoption of environmental protection as a third guiding principle by ATCPs illustrates the capacity of the ATS (Stokke & Vidas 1996) to adapt to new developments and to ease the increasing pressure and scrutiny placed upon what has been perceived as the 'elitist' regime of a select few states. The adoption of the Protocol in 1991 made it difficult to continue blaming the predominantly relatively wealthy ATCPs for focusing on reaping economic benefits through potential resource extraction (Stokke & Vidas 1996, p. 433).

Acknowledging the desire to preserve the Antarctic environment symbolises an important step towards the firm establishment of the ATS as an international environmental regime. In his analysis of the protection of the Antarctic environment through the ATS, Joyner (1994) coined the term *preclusive restoration* as describing "the international effort by concerned governments to pre-empt damage to the fragile Antarctic ecosystem by devising specific legal instruments to protect and conserve the south polar environment" (Joyner 1994, p. 880). According to Joyner (1994, p. 882), an effective protection of the Antarctic ecosystem requires sincere dedication of the involved states to cooperate in their effort of minimising anthropogenic impacts on the environment. Preclusive restoration represents a dynamic conservation strategy that is meant to anticipate and prevent damage to the ecosystem and that is designed to apply the precautionary principle (Joyner 1994, p. 901). Whilst the latter term is not used by Joyner (1994), he identifies the idea behind the precautionary principle as a guiding strategy in that effective preclusive restoration should "perceive even the possibility of an ecosystemic threat – and act on that possibility – rather than wait for that threat to emerge into reality" (Joyner 1994, p. 901). For preclusive restoration to work, not only is strong commitment and political will among the involved states needed, but rules and regulations guarding this principle must be based upon common values and understandings (Joyner 1994). Common values can be established and strengthened in a regime where decision-making is based on consensus (Joyner 1994). Joyner (1994) eloquently concluded that

[t]he fault for degradation of the Antarctic environment will lie neither in frail law nor in flawed policies of preclusive restoration. The law and policy are clear. Rather, the fault for failure will lie in a lack of political will among the ATCPs to monitor activities, enforce compliance, and compel compensation for liability. (Joyner 1994, p. 902)

Joyner's (1994) argumentation outlines the merits of the consensus-based system for decision-making, which lies at the heart of the ATS. However, it highlights that aside from commitment and political needed to succeed in preserving the Antarctic environment, rules and regulations to that extent have to be effectively enforced. These rules and regulations along with principles for their enforcement have to be codified within the ATS as its essential regulatory components.

Currently, the regulatory components that make up the ATS are the 1959 Antarctic Treaty at its heart, along with various Recommendations, Measures, Decisions and Resolutions that have been agreed on during ATCMs and that have become effective (Heap 2007; 82). The ATS is further defined by the 1991 Protocol on Environmental Protection to the Antarctic Treaty (Protocol) and three distinctive conventions (Heap 2007; Buck 1998) dealing with:

- The protection of seals: 1972 Convention for the Conservation of Antarctic Seals (CCAS),
- The protection of marine resources: 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), and

- The extraction of minerals: 1988 Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA).

These three individual conventions are mentioned for the sake of completeness, but shall not be discussed any further as they do not bear direct relevance for the regulation of Antarctic tourism. The Protocol and various recommendations, decisions, resolution and measures pertinent to Antarctic tourism form the centre of Antarctic tourism regulation and will be presented in greater detail in the following sections.

4.2.2 The 1991 Protocol on Environmental Protection to the Antarctic Treaty

Especially since the adoption of the Protocol on Environmental Protection in 1991, the cooperation under the Treaty has been evolving from a way to deal with the sovereignty question and scientific and logistical cooperation into a collective system of managing the Antarctic continent and protecting the Antarctic environment. (Huber 2006, p. 17)

The Protocol is said to have been born out of France's and Australia's refusal to ratify the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) (Herber 2007; Njåstad 2007; Buck 1998; Rothwell & Davis 1997). The Protocol, which came into force in January 1998, designated Antarctica as a "natural reserve devoted to peace and science" (Article II of the Protocol) and was commended as "the first time that the international community has formally recognized the finite nature of this planet" (Welch 1992, p. 651). For this reason, the Protocol has been praised as being highly effective in "taking the heat off outside pressure on the ATS" (Stokke & Vidas 1996, p. 439) as well as resolving external criticism by environmental NGOs and developing countries (Stokke & Vidas 1996). Banning oil and mineral exploitation indefinitely⁴⁵, the Protocol also institutes environmental principles guiding human activities in Antarctica and requires these activities to undergo a prior environmental impact assessment (Njåstad 2007, p. 783). It further establishes the Committee for Environmental Protection (CEP), which brings together representatives of all ATCPs with the task to monitor and report back on the implementation of the Protocol (Rothwell & Davis 1997).

The six annexes of the Protocol form an essential part of it. Article 9 (2 & 3) of the Protocol enables ATCPs to recommend the adoption of new annexes or the modification of existing annexes, which shall reflect the flexible and robust nature of the ATS and strengthen its ability to react to new developments (Rothwell & Davis 1997). The capacity of the provision of Article 9 (2) has already been proven by the addition of two annexes to the four annexes that were originally part of the Protocol. In May 2002, Annex V with a focus on area protection and management, entered into force, and during the XXVIII ATCM in Stockholm, Annex VI on liability issues was adopted (Njåstad 2007, p. 783). Table 4.3.1 provides a brief overview of the six annexes to the Protocol and their characteristics.

⁴⁵ Article 25 (2) of the Protocol provides for a Review Conference which may be held 50 years after the Protocol entered into force, i.e. in 2048. Modifications of the Protocol that Parties may propose for this review conference require a majority vote by the ATCPs (including support by 75% of the original signatories to the AT). Furthermore, the ban on mineral resource extraction can only be lifted if, in addition to a majority vote, another binding legal regime has been adopted for Antarctic mineral resources (Rothwell & Davis, 1997).

Table 4.2.1: Annexes of the Protocol

Annex	Focus	Came into force	Main points
I	EIA (Environmental Impact Assessment) Procedures	14 January 1998	<ul style="list-style-type: none"> ○ Requires activities to undertake environmental assessments before they can proceed ○ Only activities with less than minor or transitory impacts are allowed to proceed automatically ○ All other activities have to go through either an Initial Environmental Evaluation (IEE) or a Comprehensive Environmental Evaluation (CEE) (with CEEs being scrutinised by all ATCPs)
II	Conservation of Antarctic Flora and Fauna	14 January 1998	<ul style="list-style-type: none"> ○ Supersedes the 1964 Agreed Measures for the Conservation of Antarctic Flora and Fauna (Rothwell & Davis 1997, p. 35) ○ Intends to protect Antarctic flora and fauna, and prevent the introduction of alien species ○ Lists a few specially protected species, import restrictions on non-native species and precautions regarding the introduction of micro-organisms (no poultry is allowed)
III	Waste Disposal and Waste Management	14 January 1998	<ul style="list-style-type: none"> ○ Represents a comprehensive system for waste management (waste removal, storage, incineration, disposal on sea and land) ○ Aims to reduce the amount of waste produced or disposed of in Antarctica ○ Explicitly applicable to NAPs, tourism and all other governmental and non-governmental activities in Antarctica
IV	Prevention of Marine Pollution	14 January 1998	<ul style="list-style-type: none"> ○ Aims at preventing marine pollution through any kind of discharge (oil, noxious liquid substances, garbage and sewage) from vessels into the sea ○ Applies to all vessels flying an ATP's flag or supporting an ATP's operations in the AT area
V	Area Protection and Management	24 May 2002	<ul style="list-style-type: none"> ○ States that any area – marine or terrestrial – may be put under special protection as outlined in a Management Plan, which will manage, restrict, or prohibit activities in this area ○ Two types of special areas can be distinguished: Antarctic Specially Protected Areas (ASPAs) and Antarctic Specially Managed Areas (ASMAs) ○ Any ATCP, the CEP, the Scientific Committee on Antarctic Research (SCAR), or CCAMLR can propose special areas
VI	Liability Arising from Environmental Emergencies	Not yet in force	<ul style="list-style-type: none"> ○ Aims at encouraging preventative measures and contingency plans for emergencies to be developed by all NAPs, tour operators and other governmental and non-governmental operators in the AT area ○ Requires operators to take appropriate and prompt response actions in case of emergencies or assume liability for paying the costs for response action if they fail to take response action themselves and the latter has to be taken by other actors

Only Annexes III and VI, and Articles 3, 8, and 15 of the Protocol make a specific reference to tourism. However, as the Protocol clarifies its applicability to all activities in the Antarctic Treaty area from the start, it can be argued that it is superfluous to list activities individually in the text of the Protocol and its annexes. Annexes III, IV, V and VI are of

particular importance for Antarctic tourism as they bear direct relevance to vessel and/or landing operations in the Antarctic in terms of precautions to be met, and areas or activities to be avoided. Because regulatory issues pertaining to tourism are looked at in greater detail in the succeeding sections, the author refrains from discussing these aspects at this point.

The Protocol represents a benchmark in the history of the ATS as it reflects the first attempt of the Parties to develop a comprehensive and legally binding instrument focusing on the protection of the Antarctic environment (Njåstad 2007, p. 784). The Protocol works towards minimising environmental impact in the Antarctic by increasing environmental awareness among NAPs and non-governmental operators alike and by implementing a control mechanism based on mutual inter-Party monitoring of environmental practices (Njåstad 2007, p. 784).

Despite the positive intentions and the great potential of the Protocol,

it can not be said that the Protocol represents the very best efforts of the ATCPs to protect the Antarctic environment. There are a number of gaps in its provisions, no doubt partly a consequence of the political compromises made during its speedy negotiation. (Rothwell & Davis 1997, p. 39)

Common, measurable standards regarding EIAs are still wanting, the assessment of cumulative impacts on the Antarctic environment proves to be a greater challenge than anticipated, and jurisdictional problems regarding the activities of Third Party⁴⁶ states and operators remain (Njåstad 2007, p. 783).

Interestingly, one of the major loopholes within the environmental provisions of the Protocol is represented by the omission of a clear definition regarding the rules regulating the disposal of untreated sewage in the Antarctic Treaty area (Redgwell 1994, p. 629; Joyner 1992, p. 173). Article 6(1)(a) of the Annex IV of the Protocol requires untreated sewage if discharged within 12 nautical miles off land or ice shelves to be removed by the Parties except “where it would unduly impair Antarctic operations”. As the latter phrase is not further defined, the responsibility for determining whether operations would be encumbered by eliminating discharged sewage falls back into the hands of the vessel operator. The doors are open for individual operators to abuse Article 6 (1)(a) of Annex IV (Redgwell 1994, p. 629; Joyner 1992, p. 173). Moreover, Redgwell (1994, p. 629) points out that Annex IV fails to establish what is to happen with treated sewage, which according to MARPOL 73/78 (2008) may be disposed of within 4 nautical miles of land if it is disinfected and finely shredded. However, as not all countries have yet implemented Annex IV of MARPOL 73/78 (2008), this may pose problems as well (Redgwell 1994, p. 629). The direct relevance of this legal loophole to Antarctic tourism regulation can be illustrated by the presumed infringement on Annex III provisions and IAATO guidelines by an IAATO member vessel as evidenced by the expedition leader, assistant expedition leader and ice master in the 2006/07 season (7 Seas Consulting 2007; KZ Expedition Consulting 2007). A tightening and clarification of the wording of the Protocol seems to be needed to prevent legal uncertainties from arising in the future.

⁴⁶ As international treaties are binding to signatories only, Third Party states are not obliged to comply with ATS regulatory mechanisms (Lee 2005).

4.2.3 Tourism regulation: the ATS and beyond

In the early 1990s, Beck (1994, p. 377) was already stating that “tourism has become a central preoccupation for the Antarctic Treaty System”. According to Beck (1994, p. 377), ATCPs “treated tourism as a more marginal agenda concern” in the 1980s, although they realised that tourist numbers were increasing considerably. In the late 1980s and early 1990s, an increasing importance of the individual positions of certain ATPs was discernable as various ATPs attempted to design a more consistent tourism regulation within their own domain and as the issue of flag-state jurisdiction became more significant (Beck 1994, p. 379). During the *XVIII ATCM* in Cape Town in 1994, non-binding guidelines for visitors and tour operators were adopted in Recommendation XVIII-1 and tourism became a separate item on the agenda (Bastmeijer & Roura 2004, p. 774). The growing concerns among ATCPs about tourism resulted in a flurry of activity from the late 1990s onwards. In that timeframe, numerous recommendations, resolutions, decisions and measures pertaining to tourism were adopted during ATCMs as can be seen in Table 4.2.2. The ATCPs increasingly realised that the growing diversification of tourist activities would require new management approaches (ATCM 2001). During the *XXVII ATCM*, the ATCPs decided to remove the term ‘adventure tourism’ from Resolution 3 (Tourism and Non-governmental Activities), as it was believed that the resolution should apply to all forms of tourism (Bastmeijer & Roura 2004, p. 776). Following the *XXVII ATCM*, the ATCPs agreed that some Antarctic tourism issues required additional regulation (Bastmeijer & Roura 2004, p. 776). Resolutions 3 and 4 adopted in Cape Town encourage better information exchange and cooperation between ATPs regarding tourism activities and propose guidelines for appropriate contingency planning, insurance and other matters directly related to tourism operations. The following year saw the adoption of site-specific guidelines to regulate tourist activities on four frequently visited sites in the Antarctic Peninsula region. The adoption of these site guidelines set a precedent, and in 2006 and 2007, the list of sites regulated through site-specific guidelines was expanded to a total of fourteen. The trend of adopting further resolutions, measures and decisions on tourism issues is significant. During the last four years, more additional regulatory mechanisms have been adopted than throughout the whole lifetime of the ATS before 2004. Whereas this trend proves the flexibility of the Treaty regarding its adaptability to new developments, it also raises the question whether such a piecemeal approach is adequate and effective, particularly as most of these regulatory mechanisms are of a voluntary nature. The latter has been identified as a major drawback of the ATS (Molenaar 2005; Bastmeijer & Roura 2004; Cessford & Dingwall 1996; Beck 1994). However, this is just one of a range of problematic regulatory issues, which the next section looks at in greater depth.

Whilst the individual stance of various ATCPs towards tourism differs – some regard it with caution and concern whereas others sponsor and encourage it – an increasing concern has been expressed at ATCMs over the potential effect of uncontrolled tourism on national programmes and scientific activities in the Antarctic⁴⁷ (Hemmings & Roura 2003, p. 18; Rothwell 1992). It has further been argued that it is the duty of ATCPs to regulate Antarctic tourism in such a way that unrestricted growth is prohibited (Hemmings & Roura 2003, p. 18). Currently, the regulation of Antarctic tourism is facilitated through various legal ATS instruments: recommendations, measures, decisions, resolutions adopted during ATCMs, the AT itself as well as all conventions and agreements that are part of the ATS, and finally regulatory mechanisms outside of the ATS (Dinuzzi 2006). As suggested by Molenaar (2005), in the context

⁴⁷ See Recommendations IV-27, VII-4, X-8.

of Antarctic tourism, one has to differentiate between direct and indirect as well as external and internal regulation. The term *direct regulation* should be used when referring to tourism regulation on its own merit, i.e. regulation purported to regulate tourism generally. The term *indirect regulation* refers to the tangential regulation of tourism or the regulation of some particular activities undertaken during tour operations. *Internal regulation* in this context refers to tourism regulation within the ATS framework, and *external regulation* embraces all regulatory tools by external bodies such as the IAATO or the International Maritime Organization (IMO) (Molenaar 2005).

Table 4.2.2 gives an overview of the complex network of regulatory mechanisms that directly or indirectly and externally or internally affect how tourism can and shall be conducted in the Antarctic. As highlighted in Table 4.2.2, the direct and indirect internal regulation of Antarctic tourism is facilitated mainly through the Protocol and its annexes (Mason & Legg 1999, p. 73) and an array of recommendations, resolutions, decisions and measures adopted during ATCMs. These regulatory mechanisms, which are simply named in the table, are detailed in Appendix 6.

Table 4.2.2: Categories of Antarctic tourism regulation

	Direct	Indirect
Internal	Antarctic Treaty System	
	References in <u>Protocol</u> to tourism: - Art. 3 § 4 (Environmental Principles) - Art. 8 § 2 (EIA) - Art. 15 § 1 (Emergency Response Action) - Annex III Art. 1 § 1 (Waste Disposal & Management)	<u>Protocol</u> : - Annex I (EIA Procedures) - Annex II (Conservation of Antarctic Flora & Fauna) - Annex IV (Prevention of Marine Pollution) - Annex V (Area Protection and Management)
	Various <u>legally binding</u> (Measures) <u>and non-binding</u> (Decisions, Resolutions, Recommendations) <u>instruments</u> adopted during ATCMs:	
	- Recommendation IV-27 (Santiago, 1966) - Recommendation VI-7 (Tokyo, 1970) - Recommendation VII-4 (Wellington, 1972) - Recommendation VIII-9 (Oslo, 1975) - Recommendation X-8 (Washington, 1979) - Recommendation XVIII-1 (Kyoto, 1994)* - Resolution 3 (Seoul, 1995) - Resolution 3 (Christchurch, 1997) - Measure 4 (Capetown, 2004)* - Resolutions 3 & 4 (Capetown, 2004) - Resolutions 5 & 6 (Stockholm, 2005) - Resolution 2 (Edinburgh, 2006) - Resolutions 1, 4 & 5 (New Delhi, 2007)	- Recommendation VI-11 (Tokyo, 1970) - Resolution 1 (Christchurch, 1997) - Resolution 3 (Tromsø, 1998) - Resolution 1 (Madrid, 2003) - Decision 4 (Capetown, 2004) - Resolution 4 (Stockholm, 2005) - Decision 8 (Stockholm, 2005) - Resolution 3 (Edinburgh, 2006)

* Not yet effective

	Direct	Indirect
External	<p>Industry self-regulation</p> <ul style="list-style-type: none"> • <i>IAATO</i>⁴⁸ <ul style="list-style-type: none"> ○ Argo/Amphibious Vehicle Operations Guidelines ○ Boot and Clothing Decontamination procedures ○ Emergency Contingency Plan ○ Emergency Medical Evacuation Response (EMER) Plan ○ Guidelines on the Prevention of the Translocation of Alien Species ○ Guidelines on various Specialised Adventure Activities ○ Marine Wildlife Watching Guidelines ○ Operation Guidelines for Inflatable Boats ○ ROV guidelines ○ Ship Scheduling Procedures • <i>World Travel & Tourism Council (WTTC)</i> => Green Globe 21 • <i>International Federation of Tour Operators (IFTO)</i> • <i>Cruise Lines International Association (CLIA)</i> => Cruise Industry Waste Management Practices and Procedures 	<p>Shipping regulation</p> <ul style="list-style-type: none"> • <i>International Maritime Organization (IMO)</i> → aimed at safeguarding the marine ecosystem, human safety, ensuring contingency planning, emergency response operations and liability procedures ○ Maritime safety and security ○ Vessel-source pollution <p><u>Instruments:</u></p> <ul style="list-style-type: none"> ○ Athens Convention relating to the Carriage of Passengers and their Luggage by Sea (PAL 1974) ○ International Convention for the Safety of Life at Sea (SOLAS 1974) ○ International Convention on Maritime Search and Rescue (SAR 1979) ○ International Management Code for the Safe Operation of Ships and for Pollution Prevention (1983 ISM Code) ○ International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC 1990) ○ International Convention on Liability and compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS 1996) ○ IMO Guidelines for Ships Operating in Arctic Ice-Covered Waters (2002)
	<p>Intergovernmental regulation</p> <ul style="list-style-type: none"> • <i>World Tourism Organization (WTO)</i> <ul style="list-style-type: none"> ○ Sustainable Development of Tourism Committee ○ Global Code of Ethics for Tourism ○ Sustainable Tourism Stewardship Council ○ Declaration on Antarctic Tourism (1998) • <i>Convention on Biological Diversity (CBD)</i> <ul style="list-style-type: none"> ○ Guidelines on Biodiversity and Tourism Development • <i>Commission on Sustainable Development (CSD)</i> • <i>United Nations Environment Programme (UNEP)</i> <ul style="list-style-type: none"> ○ Agenda 21 issues on tourism • <i>International Union for the Conservation of Nature (IUCN)</i> <ul style="list-style-type: none"> ○ Antarctic Advisory Committee 	<ul style="list-style-type: none"> • <i>Classification societies</i> → inspection of vessels & rating → Unified Requirements for Polar Ships by the International Association of Classification Societies (IACS) <ul style="list-style-type: none"> ○ American Bureau of Shipping ○ Bureau Veritas ○ Det Norske Veritas ○ Germanischer Lloyd ○ Lloyd's Register ○ Registro Italiano Navale ○ Russian Maritime Register • <i>Insurance companies</i> • <i>Self-regulation by the shipping industry</i> → by groups of companies active in Antarctic tourism (CLIA; IAATO)

Source: Molenaar (2005); table amended and updated by the author

⁴⁸ See Molenaar (2005): ATME 2004 document No. 12 (Overview Summarising the Terms of Reference), pp. 8–9; XXVII ATCM (2004), IP 68, note 64 at Appendices F and G; XXVII ATCM (2004), IP 69, note 108 at p. 6 and Appendix B.

The most important external component of Antarctic tourism regulation is provided through IAATO. The role of IAATO within the regulatory framework for Antarctic tourism is supplementary but important, because IAATO self-regulation aims at ensuring that the guidelines set by ATCPs are met (Richardson 1999, p. 10). Moreover, IAATO members conducting tourism in the Antarctic are responsible for the *in situ* enforcement of tourism regulation. IAATO represents the industry's interests (Bastmeijer & Roura 2004). Although tour operators do not possess any true sanctioning power they self-police, which results in the ATCPs relying strongly on IAATO self-regulation (Molenaar 2005, p. 31).

As the majority of Antarctic tourism is ship-based, indirect regulation through IMO guidelines forms an important component of Antarctic tourism regulation. IMO guidelines may in fact serve as a safety net underneath what could be seen as a network of tightropes put in place through the ATS attempting to direct and focus the movement of Antarctic tour operators. ATCPs as well as SCAR and the Council of Managers of National Antarctic Programs (COMNAP) encourage the development of IMO *Guidelines for Ships Operating in Antarctic Ice-Covered Waters* (Joyner 2007; Molenaar 2005), which despite not being legally binding might emphasise inter-institutional cooperation and fill a gap with respect to specific guidance on vessel operations in Antarctic waters. Decision 4 (2004) formalises the dedication of ATCPs to work towards the development of these shipping guidelines for the Antarctic. The aforementioned IMO guidelines and other aspects of shipping regulation are discussed in greater detail in Chapter 7.

As already pointed out, the Protocol and the EIA regime set out in Annex I currently function as the only formal gatekeepers to the Antarctic (Hemmings & Roura 2003, p. 21). However, as "costs are always high, lead-times long, and the proposed activities always considered worthy and benign by their proponents" (Hemmings & Roura 2003, p. 19), it becomes obvious that there may be some problems inherent in the EIA process as operators will remain reluctant to file CEEs under any circumstances. Filing CEEs would be a lengthy and costly process, which might limit the freedom with which tour operations could be carried out (Hemmings & Roura 2003, p. 19). Further, the definitional ambiguities in the Protocol provisions on EIAs, allowing for a wide array of interpretations and varying degrees of implementation, have to be addressed if EIAs are to limit adverse impacts on the Antarctic environment effectively (Kriwoken & Rootes 2000).

4.2.4 A critique of the current regulatory situation

As already hinted in the previous sections, a few points of criticism regarding Antarctic tourism regulation through the ATS and other instruments have been identified by researchers over time. This section presents a summary of the main points of criticism that may negatively affect the effectiveness of the regulatory regime for tourism. Even if they do not have a direct adverse impact on regime effectiveness, the mere perception of existing obstacles or 'problems' by Antarctic tourism stakeholders may make the system less successful as far as the regulation of tourism is concerned.

The main 'problems' of Antarctic tourism regulation can be grouped as normative issues, operational issues, sovereignty issues, and questions regarding the status of tourism. Normative issues comprise all problems related to how

Antarctic tourism regulation is formulated and enacted in the national and international context. Operational issues describe problems concerning the way Antarctic tourism is operated, regulations are enforced, compliance is monitored and non-compliance is sanctioned. Sovereignty issues allude to problems resulting from the peculiar status of Antarctica as a principally “sovereignless land” (Polk 1998, p. 1395), although sovereignty claims existing prior to the conclusion of the AT have been, one might say, ‘frozen’ only and not revoked. Finally, questions regarding the status of Antarctic tourism are concerned with ethical issues and the ‘righteousness’ of running commercial tourism operations on a continent devoted to science, peace and now, after the enactment of the Protocol, environmental protection. The following paragraphs present the main ‘problems’ of Antarctic tourism regulation within this classification scheme. The discussion focuses on issues related to tourism regulation through the ATS as industry self-regulation has already been critically looked at in the previous Chapter.

4.2.4.1 Normative issues

Serious concern has been expressed regarding the way in which regulatory mechanisms or guidelines are formulated and enacted in national and international legislation. A criticism frequently levelled at tourism regulation through the ATS is that it lacks a systematic and comprehensive approach (Beck 1994). Instead of representing a single, unified and centralised regime, the regulatory regime consists of a fragmented and dispersed set of regulatory mechanisms (Molenaar 2005; Bastmeijer & Roura 2004; Beck 1994), which often possess a merely hortatory nature (Bastmeijer & Roura 2004; Richardson 1999). Similarly, IAATO guidelines are of a voluntary nature only, which is considered a problem (Mason & Legg 1999, p. 80).

A complex and fragmented network of regulatory mechanisms pertaining to Antarctic tourism reflects the ease with which new mechanisms can be adopted. This can be regarded as a positive feature of the ATS as it represents the capability of the regime to react to new developments. On the other hand, a complex system of regulatory mechanisms also increases the likelihood that these mechanisms will not carry much regulatory power, which is reflected by the voluntary nature of most of them. At the same time, it is a complicated exercise to maintain the overview of which mechanisms are applicable and in force, which mechanisms have been replaced and which have simply become redundant. Some adopted recommendations or measures became insignificant as they were never followed through with (Richardson 1999, p. 3). An example of these (now) insignificant mechanisms is Recommendation VIII-9 (2b) and Annex B, which established Areas of Special Tourist Interest (ASTIs) in order to allow a better control and management of tourism. These aims should be achieved by concentrating visitors in these ASTIs and closely monitoring and containing their impacts on the environment (Enzenbacher 1992a, p. 260). However, no ASTI has yet been created on the ground (Bertram 2005, pp. 247–248; Richardson 1999).

Other problematic normative issues that have been commented on in the literature are the inapplicability of the ATS regulatory regime to Third Party states and their nationals (Richardson 1999, p. 15; Beck 1994, p. 382; Beck 1990, p. 351) and, similarly, the non-applicability of industry self-regulation to non-members of IAATO (Molenaar 2005, p. 34). The activities of operators based in Third Party states are an area of concern (Bastmeijer & Roura 2004, p. 779) that has not received proper attention (Beck 1994, p. 382). To complicate the issue further, national legislation of ATCPs cannot easily be applied to citizens of other countries (Hall 1992, p. 7). Hall (1992) explains that, “[a]s the regulation

of tourism under domestic law would be regarded as an exercise of sovereignty by that nation, it is highly likely that such an exercise would be challenged by other signatories and consultative Parties to the Antarctic treaty [sic]" (Hall 1992, p. 7). This may be the reason why neither the AT nor the Protocol is explicit about jurisdictional issues as far as individuals are concerned (Bastmeijer & Roura 2004, p. 779).

Further, national differences and inconsistencies with respect to the implementation of EIA procedures exist (Kriwoken & Rootes 2000; Richardson 1999), which make the adequate, effective and internationally consistent regulation of Antarctic tourism extremely difficult. A case in point is represented by the different approach to authorising tour operators planning to visit Antarctica. Seven ATCPs (Australia, Germany, the Netherlands, New Zealand, Norway, Sweden, and the United Kingdom) "have provided their regulatory authorities with the discretion to grant a permit to an operator" (Polk 1998, p. 1421) after the submission of an EIA. Other countries, such as the USA, which most Antarctic tour operators originate from, were not able to do this, which again calls to question the effectiveness of EIA provisions under the Protocol.

Bastmeijer & Roura (2004) claim that "EIA and monitoring obligations under the Protocol are necessary, but not sufficient, to address the issue of cumulative impacts adequately" (Bastmeijer & Roura 2004, p. 771). Dinuzzi (2006) agrees that problems associated with potential cumulative impacts cannot be addressed adequately through the Protocol because only single events or activities are assessed through the EIA⁴⁹ process and the additive impact on sites that may develop into tourism destinations is disregarded (Dinuzzi 2006, p. 217). In fact, the lack of knowledge about environmental and cumulative impacts of tourism activities largely seems to form the backbone of this problem (Scott 2001, p. 968) and accentuates the need for trained staff.

Problems of definition or vagueness existing in the Protocol with regard to assessing the scale and nature of environmental impacts (Kriwoken & Rootes 2000), along with ambiguity in terms of defining tourism and drawing distinct boundaries between Antarctic tourism and other non-governmental activities (Scott 2001, p. 968), further burden the implementation and enforcement of Antarctic tourism regulation. Murray & Jabour (2004, p. 310) and Lamers *et al.* (2007) offer the criticism that the terms 'tourist', 'tourism', 'expedition', 'adventure tourism' and 'non-governmental activities' have not been adequately defined within the ATS, which results firstly in confusion when discussing these issues and secondly in inconsistencies in tourism regulation.

4.2.4.2 Operational issues

In the area of operational issues, the hortatory character of regulatory mechanisms and definitional vagueness inviting different interpretations of tourism regulation as discussed in the previous section come into play again. Coupled with varied levels of national commitment and capacity to implement tourism regulation, enforcement and sanctioning issues occur. According to Foreman (1991–1992, p. 876), one reason for these difficulties is the lack of mechanisms to enforce regulations in the Protocol. Monitoring and enforcement are further encumbered by "Antarctica's hostile environment, remoteness, communications inadequacies, and legal uncertainties" (Beck 1994, p. 379) and by a lack

⁴⁹ Nonetheless, it has to be noted that, so far, EIAs are still the most widely used mechanisms to measure and limit adverse environmental impacts of tourism (Wong 2004, p. 458).

of environmental baseline data against which impacts may be measured (Richardson 1999, p. 13). Further, on-site tourism management in Antarctica is largely wanting (Mason & Legg 1999, p. 81; Cessford 1997) as there are only very few sites that have visitor information centres and on-site staff, such as Port Lockroy.

Antarctic tourism vessels flying flags of convenience pose another problem, which will require attention in the future (Molenaar 2005, pp. 33–34; Richardson 1999, p. 10; Beck 1994, p. 382). It is relatively common for operators to register their vessels in states that offer financial or operational advantages, as illustrated in Appendix 9. Often, these flag states are not signatories to the AT, which results in the reduced applicability of ATS regulation for vessels flying the flags of Third Party states whilst navigating on the high seas. Appendix 9 also hints at the often complex, intertwined and confusing ownership, charter and sub-charter arrangements for tourist vessels, which make an internationally coherent enforcement, policing and sanctioning of shipping regulation relatively complicated.

It has been lamented that, despite the in-built flexibility of the ATS which allows for adapting policies in line with new developments, “the decision-making process is slow [and] the legal and regulatory framework for tourism has not developed as fast as the industry itself” (Bastmeijer & Roura 2004, p. 776). Currently, ATS policy-making can be described as reactionary because new developments are not so much anticipated and steered into the desired direction as they are retrospectively considered and potentially regulated (Dinuzzi 2006, p. 215). In addition, as discussed by Huber (2006), ATCPs take a long time to approve measures decided on during ATCMs, which makes the process from the adoption of regulatory mechanisms to their coming into effect cumbersome and lengthy. In his analysis of the length of the approval process, Huber (2006, p. 27) assesses that it takes ATCPs on average three years and ten months to approve a recommendation. This figure is derived taking into account only those Parties that possess consultative status at the time a measure was adopted (Huber 2006, p. 27).

Tourism is a rapidly developing sector, particularly in a region where, from an operational point of view, tourism is tightly coupled with technological capabilities. Here more than anywhere else, to be effective regulation needs to be flexible, proactive and able to be implemented without delay.

4.2.4.3 Sovereignty issues

Despite the sovereignty question being dealt with in Article IV of the AT in a Socratic manner, Antarctica is still not considered to be “subject to undisputed territorial sovereignty” (Bastmeijer & Roura 2004, p. 767). This lack of undisputed sovereignty considerably weakens the regulatory regime (Molenaar 2005, pp. 2–3; Beck 1990). In addition, the unsuitability of territorial jurisdiction, which is partly due to the large unclaimed chunk of the Antarctic continent, reduces the number of available alternatives (Molenaar 2005, pp. 2–3; Beck 1990).

Scott (2001) claims that sovereignty issues are the primary source of difficulties regarding tourism regulation. Some countries such as Chile and Argentina support tourism activities in the Antarctic Peninsula region because tourism can be used as reinforcement for the sovereignty claims of these countries (Enzenbacher 2007; Scott 2001). This questions the success a consensus system such as the ATS can have regarding the formulation, adoption and enforcement of new regulatory mechanisms with a focus on tourism.

According to Young & Osherenko (1993), institutional bargaining is complicated by the premise of having to reach consensus. When deciding on the character of a policy problem in order to negotiate solutions, each party represents a “complex collective entity ...and ... intrusions of exogenous factors that threaten to divert the attention of participants or sap their political will” (Young & Osherenko 1993a, p. 228) have to be avoided. National interests in terms of endorsing and supporting Antarctic tourism versus opposing and limiting it render negotiations on tourism-related topics within the ATS framework difficult. The ethics of resource use may be repeatedly questioned and argued over (Prosser 1998) because of the involvement of diverse interest groups and states with different opinions regarding the sovereignty situation.

Furthermore, the status of unresolved sovereignty may result in uncertainty in the area of jurisdictional control and responsibility in Antarctica. As Prosser (1998, p. 399) outlined, “[t]his is one disadvantage of the absence of jurisdictional sovereignty and ownership: There is no polar police force.”

4.2.4.4 Questions of the status of tourism

As tourism did not receive specific attention when the AT was drafted, its status had been questioned for some time. Beck (1994) comments that tourism was regarded “as a threat to not only Antarctica’s environment but also its status as a continent for science” (Beck 1994, p. 381). The previous Chapter has shown that Antarctic tourism is now being accepted as a legitimate, peaceful activity and that it cannot be prohibited, but tourism is still under enormous scrutiny and raising ethical issues. Is it an appropriate activity in Antarctica (Prosser 1995, p. 119)? Can access to the Antarctic continent be denied to those who are not part of the elite group of scientists, politicians, managers and staff of NAPs privileged to visit Antarctica? Would it be in the interest of the international community to reserve the whole continent for science only? Would such a decision be ethical?

Other questions that are being asked link the above considerations to currently available regulatory mechanisms. For instance, Pineschi (1996, pp. 276–277) criticises that the Protocol is not designed to regulate Antarctic tourism effectively as tourism is considered in the same manner as all other human activities. This, Pineschi (1996, p. 277) argues, is inadequate due to the peculiarities of tourism itself and the problems originating from conducting tour operations in the Antarctic. Is it actually justifiable to distinguish between human activities and Antarctic tourism, when the latter is so clearly a range of activities conducted by *human* travellers and tour operators? Opinions seem to diverge on this matter. According to Pineschi (1996, p. 277), ATCPs all agreed that tourism has to be regulated in some way but some Parties (e.g. the USA) seem to take the position that Antarctic tourism is already adequately covered by the Protocol and all that is needed are guidelines to complement the regulation. Other Parties (France, Chile, Italy and Spain) would like to see a separate Annex on tourism regulation (Pineschi 1996, p. 277).

Directly related to the wish expressed by some ATCPs to draft a more comprehensive separate regime regulating Antarctic tourism, Parties have claimed that the international legitimacy of the ATS is undermined by a strong reliance on industry self-regulation, because the ATS aims at exclusivity regarding the governance of Antarctica (Moleenaar 2005, p. 37). This not only questions the status of Antarctic tourism in the context of the principles of peace, science and environmental protection as endorsed by the ATS, but also the legitimacy and status of a self-regulatory

regime for Antarctic tourism. The lack of clarity regarding the status of Antarctic tourism and its self-regulatory components represents another complication for an Antarctic tourism regulatory regime.

4.3 Analysis of regime effectiveness and its definition

...Antarctica is seen by many as the last true wilderness on the planet and therefore entitled to a higher level of performance in terms of governance than anywhere else. (Molenaar 2005, p. 272)

The discussion of the drawbacks of the current Antarctic tourism regulatory regime in the previous section and in Chapter 3, results in the instinctive and rather impulsive conjecture that the regulatory regime for Antarctic tourism would only exhibit a moderate or low level of effectiveness. However, it has to be questioned whether this is a legitimate inference. Putting any matter or any regime under scrutiny would reveal benefits as well as drawbacks, advantages as well as disadvantages. An intuitive assessment of the effectiveness of a regime would not only be highly subjective and spontaneous, but would also invite criticism about its lack of robustness and validity. The term 'effectiveness' itself is difficult to define unambiguously. In the glossary, a definition of effectiveness as describing the quality of an action or process resulting in the desired outcome is provided, which an intuitive assessment of effectiveness tends to elude. Is it actually possible to determine the effectiveness of a regime in any other than an intuitive manner? The conclusions from a variety of policy researchers working in the field of regime analysis can provide some guidance in this respect. They not so much question the possibility of assessing the effectiveness of international regimes as they propose different ways of approaching this task. According to Osherenko & Young (1993), international environmental regimes gain importance in an increasingly interdependent and politically entwined world. Questions of regime formation and effectiveness need to be asked not only to assess the current status of regimes, but also to assist in increasing the success of international regimes (Osherenko & Young 1993, p. 2). Consequently, a substantial amount of research has been conducted with the focus on regime formation (Young 1998; Hasenclever 1996; Rittberger *et al.* 1995; Young & Osherenko 1993; Keohane 1984; Krasner 1986), regime compliance and, more recently, regime effectiveness (Shimshack & Ward 2005; Hisschemöller & Gupta 1999; Buck 1998; Young 1998; Stokke & Vidas 1996; Vicuña 1994). The conclusions these scholars draw help with looking at the issue of regime effectiveness in an Antarctic tourism context.

Drawing on regime theory, however, poses another question. Does the collection of regulatory mechanisms pertaining to Antarctic tourism constitute a regime? The term regime is used rather liberally in this thesis, and it needs to be asked whether this is justified. Here again, regime analysts and their definitions of a regime come to aid.

This section defines a regime and discusses the concept of regime effectiveness in order to enable the case to be built for assessing the effectiveness of Antarctic tourism regulation. The conclusions derived in this section guide analysis throughout the thesis and are specifically referred back to in Chapter 7, which integrates the results of the interviews and the Delphi study into a discussion of the effectiveness of Antarctic tourism regulation and future options.

4.3.1 Antarctic tourism regulation – a regime?

Krasner's (1986, p. 186) definition of a regime as "a set of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations" is widely accepted and adopted in the literature (Hisschemöller & Gupta 1999; Van der Lugt 1997; Levy 1996; Stokke & Vidas 1996). In this context, principles and norms are regarded as the foundation of a regime, implying that any change of norms and principles would characterise a transformation of the regime itself, whereas rules and decision-making procedures may be subject to change within a regime (Van der Lugt 1997, p. 223).

The primary function of a regime is represented by its capacity to link a substantive element, or the content of a regime, which comprises principles, rules, rights and responsibilities of actors, with a procedural element, which is concerned with the *modus operandi* of a regime (Hisschemöller & Gupta 1999, p. 156). Regimes may help a group of actors in a certain area of international relations to coordinate their activities and behaviour with respect to a certain policy problem. In this vein, regimes focus on dealing with very specific problems. Nowadays, regional or global environmental problems are commonly addressed by environmental treaties or agreements that constitute regimes (Levy 1996, p. 395).

Hisschemöller & Gupta (1999, p. 155) define a policy problem as "a gap between a set of values (norms, goals) and an undesirable situation that can be bridged by government action." As such, policy problems are subjective and socio-political constructs based on value systems and perceived realities; and power structures within a group of actors determine which problems are being addressed (Hisschemöller & Gupta 1999, p. 155)⁵⁰.

Can Antarctic tourism regulation be regarded as a regime? As the above paragraphs show, regimes focus on a specific problem. This problem is directly addressed through a set of legal and paralegal instruments embedded in a structural or procedural framework, which facilitates the cooperation and communication of a group of stakeholders working within the regime. The questions that need to be answered are firstly, whether Antarctic tourism phenomena can be considered by policy-makers as a 'problem' that needs to be addressed, and secondly, whether attempts to deal with Antarctic tourism issues fit into the procedural framework of a regime.

As outlined in Chapters 1 and 3, Antarctic tourism is commonly regarded as a 'problem', particularly in view of its recent rapid growth and diversification. From the viewpoint of the ATS, tourism is an 'externality'. It is perceived by some as a threat to the environment, to science (Beck 1994) and to the integrity of the ATS (Enzenbacher 2007). The ATS itself is a well-established international regime with the primary aim of protecting the status of Antarctica as a continent for science and peace and the secondary aim of environmental protection, which is gaining more and more importance. For a long time, Antarctic tourism functioned outside the ATS as a matter that had not been provided for when the Treaty was drafted. Eventually, various regulatory mechanisms were implemented in an attempt to control tourism, which soon developed from a 'concern' into a 'policy problem'. This development is illustrated by the creation of a Tourism Working Group at the XXVII ATCM (Bastmeijer & Roura 2004, p. 775) that solely focuses

⁵⁰ It is clear that Hisschemöller & Gupta (1999) adopt a constructivist approach in their paper, which analyses the effectiveness of international environmental regimes.

on discussing and regulating Antarctic tourism phenomena during ATCMs. The fact that tourism is not part of the policy problem the AT set out to tackle, justifies the consideration of Antarctic tourism issues as a separate 'problem'. The first criterion regarding the aims of a regime to deal with a specific problem seems to be fulfilled.

When considering the procedural element, issues get somewhat more complicated. The structure of decision-making processes regarding Antarctic tourism regulation is complex, non-linear and bifocal, with both the ATS and IAATO contributing to decision-making as regulatory mechanisms for tourism are concerned. Clearly, only direct regulation that solely focuses on tourism to the Antarctic, an overview of which was provided in Table 4.2.2, is of importance when assessing the appropriateness of Antarctic tourism regulation as an individual regime. Only direct regulation serves the primary goal of solving the policy problem in question – auxiliary, indirect regulatory mechanisms may well play an important role, but they cannot be considered part of an Antarctic tourism regulatory regime. Hence, two primary groups of actors, the ATCPs and IAATO, would form the backbone of an Antarctic tourism regime. This is the point where the differences in structural and functional precepts pose a problem. Having two principal groups of actors working on one problem from two different angles is not usually a characteristic of a regime. Furthermore, international regimes normally extend formal membership to states instead of non-state actors, although the latter often play an important role in international regimes (Young 1998). In fact, Young (1998, p. 281) argues that non-state actors need to be considered when analysing a regime. As the majority of IAATO members are based in ATP states, ATS regulation applies to them, and their role can be seen as facilitators of ATS regulation. In view of their ambition to adhere to self-imposed guidelines and codes of conduct, which aim at minimising their environmental impact, IAATO and its members could even be regarded as enhancing ATCP regulation and extending it beyond the ATS.

Under these considerations, the question whether content or procedure should be given more weight is academic, as it could be argued either way. Albeit denoting a fragmented system of mainly hortatory rules, regulatory mechanisms laying out responsibilities, values, norms and principles with respect to Antarctic tourism operations describe the regime's content. The hortatory nature of most regulations should not prevent a system of regulatory mechanisms being referred to as a regime, because a regime does not have to be legally binding (Levy 1996). Procedures related to Antarctic tourism regulation are established, although two separate groups approach the policy problem from different perspectives. On the one hand, this could be interpreted as disqualifying the array of Antarctic tourism regulatory mechanisms from being classified as a regime. On the other hand, as outlined in the previous paragraph, currently IAATO and the ATS can be seen as complementing each other. As this thesis argues, IAATO intends to anticipate and pre-empt tourism regulation through the ATS, and the ATCPs still largely rely on IAATO to regulate Antarctic tourism (Enzenbacher 2007; Molenaar 2005). Therefore, the overlaps in developing regulatory mechanisms between these two groups are relatively small. Despite different procedures – a consensus-based system of government representatives vs. a majority-ruled system of industry representatives – the policy result is largely complementary thus far. For these reasons, the researcher decided to consider the network of regulatory mechanisms focusing on Antarctic tourism as a regime, a decision that is backed by Stokke & Vidas (1996, pp. 439–440) who referred to the system of Antarctic tourism regulation as an evolving regime. The Antarctic tourism regime extends from the ATS through the ATPs and IAATO to those conducting and participating in tourism operations in Antarctica

and comprises all mechanisms directly and solely aimed at regulating Antarctic tourism. Thus, it encompasses ATS and IAATO tourism regulation. When referring to the Antarctic tourism regulatory regime, this thesis makes use of the aforementioned definition. The considerations of regime effectiveness and particularly the discussion in Chapter 7 build on this definition and the following conceptualisation of regime effectiveness.

4.3.2 The concept of regime effectiveness

In the context of developing and adopting Agenda 21 in the early 1990s⁵¹, policy-makers and academics struggled with conceptualising regime effectiveness and establishing judging criteria for an assessment of the effectiveness of environmental regimes. Researchers have recently focused their attention on these issues and still do not agree on how regime effectiveness is to be defined or assessed. Constructivist approaches (Underdahl 2002; Hisschemöller & Gupta 1999) oppose positivist and postpositivist approaches (Downs 2000) in regime analysis. Conceptualising regime effectiveness is thus tackled from different viewpoints, although the term itself is difficult to define.

The concept of regime effectiveness is a very ambiguous and elusive one, mainly because there are various dimensions of effectiveness (White 2002; Sprinz & Helm 1999, p. 360; Young 1994). Over time, scholars have formulated a variety of definitions for regime effectiveness, ranging from very comprehensive but equally general definitions of effectiveness, such as “[d]oing right things, leading to right outcomes” (Selvam & Rajagopalan 2005, p. 613) to highly complex definitions that attempt to capture the multiple dimensions of regime effectiveness. Young’s (1994, pp. 143–160) definition of regime effectiveness falls into the latter category. He identifies the following dimensions of regime effectiveness:

- Effectiveness as problem solving (Does a regime succeed in solving the problems whose elimination was the reason for its formation?)
- Effectiveness as goal attainment (Does a regime succeed in meeting its goals over time?)
- Behavioural effectiveness (Does a regime achieve a change in behaviour in its members as a result of regime regulations?)
- Process effectiveness (Does a regime result in the successful implementation of its provisions in its members’ national legislation?)
- Constitutive effectiveness (Does a regime succeed in initialising discussion and action on eminent regime-related issues by its members, under the use of time, effort and resources?)

⁵¹ At the 1992 United Nations Conference on Environment and Development (UNCED), two important global environmental conventions were signed – the UN Framework Convention on Climate Change and the Convention on Biological Diversity. Two further agreements were concluded at the 1992 UNCED: the Rio Declaration on Environment and Development and an accompanying action programme that was supposed to guide development from the 20th into the 21st century and that became known as Agenda 21 (Sand 1992, p. 1). A series of discussions preceded the adoption of Agenda 21, all of which were facilitated by the UNCED Preparatory Committee. The latter also embarked on an extensive survey of existing international environmental agreements (Sand, 1992, p. 1). During the third session of the UNCED Preparatory Committee in August/September 1991 that preceded the adoption of Agenda 21, a set of criteria to assess the effectiveness of existing environmental regimes was developed (Sand 1992, p. 4). Agenda 21 reflected the desire of the international community to look into the adequacy and success of international environmental regimes in order to further strengthen commitment to an environmentally sound path to development. The 32 assessment criteria identified in Agenda 21 provide a very extensive framework for an evaluation of regime effectiveness, but they do not conceptualise the issue. They look into what has been achieved since regime creation, but it is not clear in which way these 32 criteria would be judged or weighted.

- Evaluative effectiveness (Does a regime generate “results that are efficient, equitable, sustainable, or robust” (Young 1994, p. 149)?)

Young’s (1994) definition of regime effectiveness is highly complex and very detailed. Some of the dimensions he lists appear to be inherently linked, such as effectiveness in problem solving, constitutive effectiveness and goal attainment, as the latter essentially marks the success in dealing with the ultimate problems the regime was set up to deal with. This could not be achieved without sufficient constitutive effectiveness. Further, process effectiveness seems to be related to the overall effectiveness in problem solving because it is most likely that without the successful implementation of the regime’s provisions in their members’ national legislation, the policy problem in question could not be adequately addressed. From a theoretical point of view, Young’s (1994) six dimensions of regime effectiveness are very analytical and highly useful for in-depth case studies of the historic, present and future configuration, characteristics and success of regimes, but from a practical point of view they are almost too complex to deal with.

Underdahl (2002) and Levy (1996) agree with Young (1994) that the concept of regime effectiveness contains several dimensions, although they do not go as far as distinguishing six different dimensions. Instead, they settle for three. Levy (1996) sees compliance, behavioural change and policy suitability as the determinants of regime effectiveness, and Underdahl (2002) considers behavioural change, regime output in terms of rules and regulations, and the impact of the regime (in the case of environmental regimes, this would be the biophysical change in the environment) as the primary dimensions of effectiveness.

There seems to be agreement among scholars that one of the principal determinants of regime effectiveness is the success of a regime to solve the problem it was set up to solve through a positive change in the behaviour of the regime members (Stokke 2007; Ward 2006; Seelarbokus 2005; Underdahl 2002; Hisschemöller & Gupta 1999; Young 1998; Levy 1996; Stokke & Vidas 1996; Young 1994). In agreement with the views in the literature, the thesis will focus on these two aspects of regime effectiveness – the capability to solve the policy problem in question and to induce a positive behavioural change in members. However, in order to thoroughly analyse these aspects, issues that these two aspects depend on need to be taken into consideration. Here, Young’s (1998) categorisation of determinants of regime success provides a suitable guideline for this research project.

Young (1998) differentiates the following facets: problem structure, regime attributes, social practices, institutional interactions, and the broader setting. In terms of the problem structure, two main policy problems can be distinguished: coordination problems, which arise in situations where a coordination of activities is required but where interests are harmonic (Underdahl 2002, p. 20), and cooperation problems⁵², which arise in situations of diverging interests (Young 1998). Generally, Parties have greater incentives to cooperate in long-lived regimes, such as the ATS (Young 1998, p. 274). The ATS was formed as a result of a cooperation problem as is illustrated, for instance, through Article IV of the AT, which portrays the ‘agreement to disagree’ regarding the sovereignty issue. The Antarc-

⁵² Coordination problems are referred to as *incongruity problems* by Underdahl (2002), but because of the negative connotation of the term, the thesis will apply Young’s (1998) terminology.

tic tourism regime as a whole largely deals with cooperation problems, although the tour operators involved in self-regulation are also tackling a coordination problem. Despite the competitive character of IAATO members, they share the main interests of maintaining the integrity of 'their' tourist destination, good public standing and their influence in Antarctic policy-making in order to safeguard their business. In the course of the thesis, the problem structure is assessed through an analysis of the perspectives of representatives of ATCPs and IAATO members, and light is shed on the goals and interests these groups and individuals pursue in the context of an Antarctic tourism regime.

Regime attributes are important determinants for the success of a regime, as the design of a regime matters (Gah-laut & Zaborsky 2004; Sprinz & Helm 1999; Young 1998; Stokke & Vidas 1996). It has repeatedly been stated that "institutional arrangements do serve to channel the behavior [sic] of both their formal members and wider arrays of actors operating under the auspices of regime members" (Young 1998, p. 274). Decision-making procedures, monitoring and enforcement practices, and essentially compliance, all constitute regime attributes. Of particular importance for international environmental regimes are the capacity to react flexibly to new developments and maintain an improved understanding of ecosystems (Young 1998; Stokke & Vidas 1996) and at the same time to display robustness in that the regime can resist exogenous disruptions and shocks without losing its effectiveness (Van der Lugt 1997, p. 224). Mitchell (1998) argues that the way regimes deal with information and encourage timely, thorough and self-critical reporting is a significant factor in terms of their effectiveness. He states that, "promoting transparency – fostering the acquisition, analysis, and dissemination of regular, prompt, and accurate regime-relevant information – is often one of the most important functions regimes perform" (Mitchell 1998, p. 109). The manner regimes deal with information and foster information exchange is laid down in their rules, which makes transparency a regime attribute that needs to be considered. The way a regime designs its rules also impacts compliance levels, as the formulation of rules inherently determines whether members have the incentives, the capacity and authority to comply (Levy 1996). This research project puts much weight on regime attributes in its analysis of the effectiveness of an Antarctic tourism regulatory regime for the following reasons. Firstly, a few scholars (Stokke 2007; Stokke & Vidas 1996; Young 1998; Young & Osherenko 1993) have already discussed various attributes of the ATS so that comparative information is available. Secondly, procedural issues, which are strongly linked to regime attributes, are of great significance for the success of the Antarctic tourism regime because of the involvement of two different groups of primary actors. Finally, Antarctic tourism is characterised by extremely dynamic operational features and industry development, which makes the flexibility and transparency of the regime, issues of enforcement, monitoring and compliance essential for the success of the regime.

Social practices that go beyond the sets of rules and procedural considerations defining regimes are of relevance, because successful regimes tend to entail a social practice that has grown out of a complex network of relationships between members of the regime and other actors (Young 1998, p. 275). Institutionalisation is said to enhance regime effectiveness, and lively social practice enhances the legitimacy of a regime (Young 1998, p. 275). Essentially, this type of social practice has been acknowledged by Rittberger *et al.* (1995, pp. 4–5) who claim that regime effectiveness is expressed through "the verbal and practical support that a regime receives from its members". Social practices are indirectly discussed in the thesis as they are reflected by the narratives of Antarctic tourism stakeholders in relation to their opinions about the ATS and Antarctic tourism regulation. No specific weight is attached to an in-

depth analysis of social practices as the latter are tied to procedural issues in the Antarctic tourism context, and hence indirectly covered by the discussion of regime attributes. The closely knit communities of Antarctic tour operators and expeditioners, who have developed an interactive social network, influence how tourism is conducted in the Antarctic and hence, have bearing on regime transparency, compliance and enforcement issues.

Similarly, institutional linkages affect regime effectiveness (Young 1998). Young (1998) distinguishes horizontal linkages between international regimes and other international institutional arrangements, and vertical linkages between a regime and domestic institutional arrangements. So far, the analysis of regime effectiveness rarely encompassed an assessment of institutional linkages, although the latter matter because they can be the source of mutual reinforcement as well as institutional overlaps (Young 1998). In the context of the Antarctic tourism regime, institutional linkages are significant. The Antarctic tourism regime can be considered as a nested regime, which provides linkages between the wider framework of Antarctic governance through the ATS and the specific problem area of tourism. Antarctic tourism is addressed through a set of mechanisms within the ATS and through industry self-regulation. This research project is particularly interested in the linkages between the Antarctic tourism regime, the ATS and IAATO, and although linkages to other institutions such as the IMO, the HCA (Hydrographic Committee on Antarctica) or UNEP are acknowledged, a detailed analysis of these linkages would go beyond the scope of the thesis.

Finally, it is important to consider the broader setting within which regimes operate, as they are highly sensitive to the status of the greater international community, political tensions, economic considerations or environmental problems, to name just a few (Young 1998). As shown in this section, the framework of Antarctic tourism regulatory mechanisms can be considered as a separate regime, nested in the wider ATS regime and closely linked to a self-regulatory industry association. It has further been established that regime effectiveness is a complex, multi-dimensional and ambiguous concept. This research considers regime effectiveness as the success of the Antarctic tourism regime in addressing the policy problem it is meant to solve by causing a behavioural change in its actors.

4.4 Concluding thoughts

They are ill discoverers that think there is no land, when they can see nothing but sea. (Bacon n.d.)

The policy problem that the regime addresses is reflected by the premise of maintaining the environmental integrity of the Antarctic ecosystem and minimising the environmental impact through tourism. An environmental imperative has been adopted by the ATCPs through the Protocol and now forms one of the three dominant principles the ATS is based on. However, as the environmental goals formulated in the Protocol are very vague in that they are merely expressed as the attempt to minimise human impact on the Antarctic environment, the policy problem of an Antarctic tourism regime is of an equally vague nature. So far, ATCPs have not clarified what their overall goal with respect to Antarctic tourism policy is – too widespread are the interests and stakes of ATCPs and too complex a phenomenon is Antarctic tourism. However, Antarctic tourism can be considered as a human activity, and is thus covered by the Protocol. Therefore, it can be claimed without doubt that the overall aim would be to minimise the environmental

impact caused by tourism operations. IAATO states as its objective to organise environmentally sound tourism to the Antarctic and follow stringent guidelines and principles in pursuit of this goal.

Clearly, the behaviour of actors is of great importance in view of the above considerations. Regime analysis assesses behavioural change in actors in order to determine the effectiveness of the respective regime. In the Antarctic tourism context, this is complicated by the fact that hardly any records of the behaviour of actors exist prior to the formation of IAATO in 1991 and the adoption of a complex set of tourism measures by the ATCPs in the 1990s, the decade in which the Antarctic tourism regime was essentially born. Furthermore, Antarctic tourism was in its infancy prior to this time, the Protocol was not yet in force, and an environmental imperative was not yet central to the ATS. Finally, as the thesis takes a snapshot of the present situation through interview analysis and a look at a potential future of Antarctic tourism through a Delphi study, behavioural change of actors can hardly be observed.

For these reasons, the focus is on the present behaviour of Antarctic tourism stakeholders in view of the overall goal to minimise environmental impacts. Looking specifically at regime attributes, the thesis attempts to establish the degree to which the problem the regime set out to address is enacted in the regime's sets of rules, is enforced, monitored and complied with. Here, procedural issues are illuminated in pursuit of determining the effectiveness with which the regime operates. The researcher acknowledges that this limited focus can be seen as disadvantageous for an overall assessment of the effectiveness of an Antarctic tourism regime, but at the same time realises the potential of a thorough analysis of the regime attributes and the opportunities this research opens for future projects. As outlined in Chapter 2, this research aims at examining the effectiveness of the regulatory regime for Antarctic tourism under consideration of the current and anticipated future development of Antarctic tourism, which is considerably influenced by stakeholder behaviour and decision-making. Hence, this thesis research expands the current knowledge base by analysing qualitative data on the ethos and practice of Antarctic tourism stakeholders and integrating these into a discussion of regime effectiveness.

CHAPTER 5



5 Stakeholder perspectives: a discussion of results from the interviews

All our knowledge has its origins in our perceptions. (Leonardo da Vinci n.d.)

This Chapter discusses the results of the interviews, presents data in support of an evaluation of the effectiveness of Antarctic tourism regulation and summarises the stakeholders' perspectives on the ethos and practice of Antarctica tour operators. As outlined in Chapter 2, the interviews conducted between January 2006 and March 2007 aimed at evaluating the effectiveness of the current regulatory regime for Antarctic tourism drawing on the 'untold stories' behind official statements on the ethos and *in situ* practices of Antarctica tour operators under consideration of existing regulatory mechanisms. To achieve this aim, the configuration and success of the Antarctic tourism regulatory regime has to be assessed from the perspective of Antarctic tourism stakeholders. Similarly, issues have to be considered regarding governmental tourism regulation and self-regulation, compliance with guidelines, and the level of communication and cooperation between stakeholders.

Drawing on stakeholder interviews, this Chapter⁵³ focuses on presenting a range of factors that need to be taken into consideration when assessing the effectiveness of Antarctic tourism regulation as emerged from the data attained. These factors comprise the practice and ethos of Antarctic tourism, the comprehensiveness, rigour and success of the various regulatory mechanisms, and the level of cooperation between the different stakeholders. The factors are examined from the viewpoints of those involved in Antarctic tourism regulation and practice, and are then compared to the cornerstones of a regulatory regime as the stakeholders would like to see it. Contrasting the current practice and effectiveness of regulation with the envisioned regulation of Antarctic tourism allows conclusions to be drawn about regulatory aspects that may be emphasised in the future, or changes that may be needed in tourism practice and regulation.

As detailed in the methodology Chapter, the broad topic guide followed during the interviews focuses on four main themes, which shall be reiterated below. This Chapter will present the data obtained through the interviews along the same lines and will follow these four key themes:

1. The current state and anticipated future development of Antarctic tourism

This theme aims at identifying challenges and threats to tourism development in the Antarctic in order to inform a discussion focusing on regulatory mechanisms that are currently in place or could be developed to adequately respond to changes anticipated with respect to future tour operations in Antarctica.

⁵³ This Chapter integrates a paper by Haase et al. (2007), which analyses the first 12 interviews conducted between January and May 2006.

2. Antarctic tourism practice and ethos: perspectives on self-regulation

Here, light is shed on the rationale behind self-regulation, the cornerstones and functionalities of the self-regulatory regime, and finally, on how successful self-regulation is perceived to be. Moreover, discrepancies between Antarctic tourism ethos and practice along are analysed.

3. Perspectives on Antarctic tourism regulation through the ATS

This theme investigates problems with respect to the current regulation of Antarctic tourism through the ATS as they are perceived by stakeholders and looks at the importance of the ATS in terms of regulating Antarctic tourism.

4. Internal and external cooperation

Exogenous and endogenous cooperation, within and between stakeholder groups, is analysed to assess the potential for effective communication regarding to, and implementation and enforcement of Antarctic tourism regulatory mechanisms.

The analysis of the interviews followed an iterative and primarily inductive approach as explained in Chapter 2. The main patterns and categories that emerged during the data analysis can be presented under the aforementioned four themes. This Chapter instigates a detailed discussion of the patterns that emerged from the data with a synopsis summarising the main conclusions derived from the interviews. This synopsis is succeeded by four sections each dedicated to one of the key themes and the examination of arguments presented regarding the make-up of a hypothetical Antarctic tourism regime as envisioned effective by the study participants. Finally, a stakeholder framework is presented which allows the interviewees to be clustered in a matrix, according to their views on an envisioned effective regulatory regime for Antarctic tourism.

5.1 Synopsis: Stakeholder perspectives on Antarctic tourism regulation

I would like IAATO to seriously consider limiting the number of ships down there. ...We do want the numbers limited, and that is for two reasons: it is (a) for the love of Antarctica, which we all have, but it is also for purely practical reasons because ... there is a limited number of landing sites. (O6)

Considering the large number of stakeholders involved in Antarctic tourism and its regulation, the views of stakeholders cannot simply be generalised. No stakeholder category was found to be homogenous; considerable diffusion of opinion was identified. These differences appeared to be driven by the personalities of the respective stakeholders and offer a range of perspectives on Antarctic tourism realities.

Overall, the stakeholders interviewed anticipated Antarctic tourism development to be characterised by further growth in numbers, greater diversification, and larger ships visiting Antarctica in the future. The stakeholders generally agreed that the relatively pristine Antarctic environment had to be protected so that the continent continued to represent one of the earth's great wilderness retreats. This, as it was argued by some, might require restrictive rules in-

cluding, for instance, a cap on the number of ships or tourists allowed to visit the continent or the restriction of visits to specific sites each season⁵⁴. This view is supported by researchers who claim that the ATS needs to address the issue of tourism growth by adopting a more strategic regulatory policy which incorporates such restrictions on tourism (Bastmeijer & Roura 2004). Nevertheless, the study participants argued that such restrictions should mainly be applied on a site-specific basis rather than implying a uniform regulation for the whole continent. The self-regulated part of the tourism industry, as represented by IAATO, was further seen as playing an important role in maintaining environmentally conscious tour operations in agreement with and in support of ATS policies. Antarctic tourism practice was regarded as being commendable although concerns were expressed about a further increase in tourism numbers and about businesses operating outside of the self-regulatory framework. An effective regulatory regime for Antarctic tourism would take this into consideration by providing the means for more stringent port-state and flag-state jurisdiction or, as some study participants argued, by integrating all Antarctica tour operators into IAATO. Generally, opinions with respect to an optimal regulatory regime for Antarctic tourism were noticeably diffused depending on whether the views of the *organisers*, the *regulators*, or the *monitors* were considered.

5.2 The current state and anticipated future development of Antarctic tourism

Polar tourism now thrives on a remarkable combination of human-induced and natural events. Its magnitude and growth will inevitably produce changes, but changes need not be for the worse.
(Snyder & Stonehouse 2007a, p. x)

The key findings in this theme refer to the anticipated further growth of Antarctic tourism and the development of land-based tourism resulting in greater pressure on specific sites in the future as well as an increased risk of accidents. Most tourism *organisers* argued that the self-regulatory regime was capable of dealing with these pressures, which was doubted by one of the *monitors* and *regulators*.

Antarctica is still a vast and largely unvisited wilderness area, relatively protected by physical barriers prohibiting an enormous intensification of tourism. Study participants expressed concern that Antarctica could become crowded in the future or even “overrun” (O5⁵⁵), when technological advances allowed for access to Antarctica through, for instance, a number of all-weather airstrips (O3, R3).

Two *organisers* conveyed that they feared Antarctic tourism might develop into a mass market similar to tourism in African wildlife parks, in the Galapagos Archipelago or in Alaska (O8, O11). These *organisers* predicted that Antarctic tourism would become a soft version of expedition tourism (O8) and that, within the next five to ten years, tourist numbers in Antarctica would reach 100,000, as more disposable income would allow more people to visit the Antarctic (O11). Although, if broken down to passenger numbers, large cruise-only vessels would have a lesser visual im-

⁵⁴ The notion of limits of acceptable change (LAC), determining how much environmental change in a region or at a specific site can be accepted and how the site can be managed accordingly (Bertram & Stonehouse 2007, p. 296), may eventually help identify a ‘sustainable’ level of tourism to specific Antarctic sites. However, further research focusing on the actual and potential cumulative impact of tourism in Antarctica is recommended in order to draw valid conclusions regarding the carrying capacity of individual sites and determine LAC for regulatory purposes.

⁵⁵ For a review of the coding used throughout this Chapter, the reader is referred to the section on interviews in Chapter 2..

pact as the same number of passengers transported on small vessels, big ships spoiled the experience for the most tourists on smaller vessels (O11).

Despite increasing numbers of big vessels cruising in Antarctica, there did not seem to be any concern that IAATO would increase the passenger limit in their guidelines on the categories of vessels that could embark in landings. It was thought to be impractical to go beyond the 500-passenger limit for ships that were allowed to land, because this would make the landing procedure risky, lengthy and unrewarding (O10).

In line with the increasing numbers of tourists visiting the Antarctic, concerns were expressed with respect to the risk of accidents (M3, O6), bio-security and waste issues (R3), and landings of large ships (R1, R2, M2, O1).

The trend of having a greater number of larger ships cruising in Antarctic waters was accentuated by various tour operators (O8, O11, O12). Smaller vessels were expected to become increasingly uneconomic and would “have to start becoming a premium product to survive” (O8).

Increasing numbers of tourists, tour operators and ships and a further diversification of tourism (R2, M1, M3, O1, O6) might lead to greater environmental pressure on a limited number of sites which would be subject to a higher concentration of vessels and people (R2, M1, M3, O6, O11). Nonetheless, environmental impacts were still seen as rather minor – the only exception being accidents, which could result in disastrous effects on the environment (O12). The consideration of accidents, however, might not be a completely theoretical exercise as already now, the growth of tourism resulted in a number of logistical challenges (O12), which could eventually have severe consequences. The recent episodes of the *M/S Nordkapp* running aground during the passage of Neptune’s Bellows, Deception Island (ATCM 2007a & 2007b), and the *M/S Explorer* sinking in Bransfield Strait (ATS 2007) provide food for thought in this respect. The fear that the impact of this growth might not be compensated by improvements in performance of individual operators was also expressed.

The industry ... is growing at a relatively steep rate, with no apparent end in sight. And that, at [*sic*] long term, overcomes, in our estimation, even improvements in performance by individual operators.
(M3)

Such a statement might be seen as problematic by tour operators who claimed that at the moment there were no indications that Antarctic tourism had an adverse impact on the environment (O4) and that Antarctic tourism was well-managed by a self-regulatory regime.

What’s happened is that as the number of people that are actually landing on the continent increased, the number of ships and airplanes increased, so has the sophistication of how we operate and the guidelines that we set and the procedures that we have in place. We have gotten better at it, and we have implemented some really great procedures and mitigated the impacts. So yes, tourism is growing, but so have the operational procedures that we have put in place. As long as they are all followed, Antarctica is a big place, it can absorb more. (O7)

Besides, as one *regulator* emphasised, although the numbers of tourists are increasing, “this trend c[ould] not endlessly continue – out of capacity and financial reasons” (R3).

In fact, according to one *organiser*, the operators were likely to put environmental consciousness before commercial interests should there be any indication that permanent harm was done to the Antarctic ecosystem.

I think we are all very respectful of the environment there. All the tour operators are very respectful, and if we felt that we were damaging things for the long term, I don't think we would continue to feel that our business interests outweigh that. We could go to other places with our ship. (O4)

That operators would put this attitude into practice was doubted by representatives of governments and environmental NGOs who stated that the tour operators did not represent a charity organisation, but were primarily commercial businesses interested in making profits (R1, R3, M3). Hence, IAATO was not only interested in the qualitative but also the quantitative growth of Antarctic tourism (R3).

Land-based tourism development was thought to be a further area of concern (R2, M2, O5, O6) with a focus on its environmental impact – particularly if the supportive infrastructure was further developed – and on search and rescue operations and contingency planning. The latter seemed to remain an unresolved issue especially when independent expeditions from non-member states were involved.

One *organiser* emphasised his hopes for the development of permanent structures for tourism to cater for the demand regarding independent science, which was not tied to individual NAPs, and scientific interests among tourists.

I would like to see a private station established with scientists (with funding) that don't have to go to a government organisation to go and do their research in Antarctica. They can go to a private provider to do the logistics. (O8)

This *organiser* argued that it was morally inadequate to “distinguish between that scientist and the guy who just want[ed] to come down and look at the wilderness” (O8). For this reason, tourism and independent science should not be discriminated against, but should be considered in the same manner as NAPs – equally advantageous as benefits were concerned and equally critically in relation to their adverse impacts.

It became clear that on the one hand, there was concern amongst *regulators*, *monitors* and *organisers* alike with respect to land-based tourism development. On the other hand, there seemed to be the desire to open land-based facilities to tourism, a desire that was driven by a ‘fairness’ argument as much as by the opportunities it would entail for specialty tourism. However, some *organisers* argued that due to the sheer cost and the scrutiny of the impact assessment process involved, land-based tourism was not cost-effective, and hence the commercial interest in this activity would remain low (O1, O2, O7, O10). If this was so, land-based tourism might not become as problematic an issue as some ATCPs seemed to believe (ATCM 2005, 2006a&b; ATME 2004).

Nevertheless, two distinct developments had to be considered when talking about land-based tourism, its feasibility and future. Firstly, it was likely that NAPs would increasingly offer accommodation for tourists on their bases (O10), particularly when thinking of the potential revenues for doing so, which some ATCPs were in dire need of (Enzenbacher 2007). Secondly, as one *organiser* remarked, when talking about land-based tourism, it was also important to acknowledge the potential of ship-based tourism opening up the interior by integrating landings with overnight camp-

ing in their itineraries (O12). Quark Expeditions, for instance, offered these options to their passengers (Quark Expeditions 2007).

It seemed that the concern about rising numbers of visitors to the Antarctic was a ubiquitous one. Concerns about an expansion of land-based tourism and the associated implications were expressed mainly by the *regulators* and *monitors*, whereas the *organisers* as ‘practitioners on the ground’ considered it too cost-ineffective to represent a problem. Therefore, the discussion in this thesis primarily focuses on an effective regulation of ship-based tourism with or without landings.

5.3 Antarctic tourism ethos and practice: perspectives on self-regulation

Recognising that self-regulation represents the major tourism management tool currently available to polar regions, then methods for defining and delivering tourist experiences seem [a] particularly relevant and useful line of inquiry. (Snyder 2007c, p. 245)

In this theme, the main results indicate a generally creditable practice of Antarctic tourism by IAATO members with a willingness of operators, crew, staff and passengers to abide by the guidelines suggested in Recommendation XVIII-1 (1994) and engage in environmentally conscious tourism. This environmentally sound practice of tourism represented the ethos of IAATO members who regarded IAATO as an environmental stewardship organisation. However, despite good practice and ethos, questions were raised, particularly by *regulators* and *monitors*, regarding the limitations of self-regulation especially in the light of increasing numbers of tourists.

The *organisers* presented a very metaphoric picture of IAATO. IAATO was compared to a ‘socialist organisation’ that depended on voluntary action, but was also a “very democratic and remarkably represented” group (O3), whose strength lay with its system of getting competitors to agree on a general strategy (O6). When asked about the character, underlying motivations and purpose of IAATO, there was a definite emotional and romantic connotation, which coloured the responses of the tourism *organisers*, for example:

A group of sympathetically minded, self-interested people got together and sat around a round table – the Knights of the Round Table, in a crude sense. ... They have altruistic intentions or intentions that go beyond their commercial interest or their immediate commercial lore. They are looking at a greater principle. (O2)

The *organisers’* view of IAATO as an association with the main purpose of providing responsible tourism (O1, O7) and maintaining its core principle of environmental stewardship (O2, O7) seemed to be rooted in the orientation towards “a greater principle” (O2).

As of yet, it is definitely not a trade association, which is the classic public relations’ issue we have. We are seen as a trade association, yet we operate from the point of view of being an environmental stewardship organisation. (O3)

Part of this effort to preserve was based on a shared passion and love for the Antarctic, peer pressure and the motivation to do everything right (O5), to “do a good job” (O7) in protecting Antarctica, and the rationalisation that a relatively pristine environment was what Antarctic tour operators depended on (O8, O11).

It still [has to be] economically viable for the operators [to go to Antarctica], but it has to balance that with what is environmentally sustainable. If you look at it this way, ... there is no reason for the operators to want to destroy the environment, because that is all they are selling. (O8)

This viewpoint was reinforced by other tour operators (O11, O12), who also confirmed that notwithstanding the risk of vessels hitting unknown rocks or obstacles and causing environmental havoc, tour operators would act with utmost caution as any accident would have severe consequences for their business. The existing risks were being taken into consideration by companies and vessels that were not ice-strengthened were even more conservative in their judgement where and how far south to go.

[T]he protectionists ... often think that the ship operators don't care, but we care a lot because it is ruining our business if we hit something, ... it is ruining your whole company if you have an accident with the ship. So, we are extremely careful. (O11)

Moreover, the lack of governmental regulation for Antarctic tourism was cited as a main *raison d'être* for IAATO (O3, O10).

The main importance for IAATO [is] to ... take over the role of ... a regulating body ..., because everybody has the same interests, everybody wants to protect Antarctica as it is now, and creat[e] ... ambassadors for the continent to be able to keep it the way it is. (O10)

Interestingly, it still seemed to be a group of small tour operators that made up the backbone of Antarctic tourism and form IAATO's "passionate and active core" (O3). The latter was also described as a "tight fraternity" (O4), a family of tour operators who strived to "look out for each other" driven by a distinctive camaraderie and the dedication to be "good neighbours" (O4).

These small operators were the driving forces that determined the direction that decision-making within IAATO took (O3) as they were often the ones who gave their time and participated in decision-making and committee work (O2, O3, O5, O10, O11, O12). However, one operator (O12) was critical of smaller ships having the greatest influence on policy-making, as every member – independent of the size of the company – had the same amount of voting power. The criticism was based on the fact that, considering market development towards bigger vessel sizes in the future, IAATO was not inclusive enough and did not adequately respond to imminent developments (O12).

Over the last decade, IAATO had grown into a large international group (O11) whose policies were a reflection of its members' opinions and beliefs. Participation was needed and so far, not lacking (O10). As long as most of the members who actively participated in decision-making were small-ship operators, it was likely that the aforementioned criticism of the exclusion of big-ship operators would not be eradicated very soon. It seemed that the small-ship operators worked hard at maintaining their own enthusiasm for the Antarctic environment and implanting it into IAATO.

We are interested in the illusion of a pristine wilderness, so that it is kept pristine, undisturbed, and then we will be positive to all rules and regulations with how to do that. That is why we are a member of IAATO, because IAATO wanted ... to save the interests of the small ... ship tour operators. So we are very much in favour of any rule or regulation that helps us to keep Antarctica pristine. (O11)

Generally, all the interviewed *organisers* considered an individual member's influence on decision-making within IAATO as adequate. The executive committee was said to be very solicitous – welcoming ideas on all issues (O4) – and everyone could express their opinions (O2, O4, O6). What counted in the end was how well-researched and argued a case was (O2). Thus, how an issue was decided upon was influenced by the effort put in by individual members (O5, O10, O11) and the interests of the majority of the members (O11), whilst a “drift towards contentment” (O2) prevailed.

Looking at the costs and benefits of an IAATO membership, operators considered the costs in terms of the time and energy spent on IAATO business as well as the annual dues and passenger fees⁵⁶ to be paid as a worthwhile investment (O2, O4, O5, O10, O11). As advantages of an IAATO membership, the following attributes ranked high:

- prestige, information sharing, professionalism (O4),
- input into decision-making (O2),
- efforts to protect the environment (O5), and
- web-based ship scheduling (O11).

It was also mentioned that operators could not stay outside IAATO in the long run (O10) as IAATO “membership open[ed] doors” (O4) and as being involved enabled companies to stay informed regarding new policy developments and to work together with other players (O3).

As one operator concluded, self-regulation worked on a rather intuitive level with the motivation to comply with the self-imposed rules and standards primarily based on peer pressure.

You have to look good in front of your peers. You don't want to look like a bad neighbour. If you talk about self-regulation, it works in many ways on a very visceral level. It is not intellectual. ... It's on an emotional level, because you don't want to be perceived among your peers and your colleagues as being a jerk. ... This is our family, a family of people that go to Antarctica, Antarctic tour operators. You don't want to look bad in front of your colleagues and peers, and so in some ways the motivation is very emotional and very basic but the ultimate goal is intellectual and lofty and important. (O4)

This emotive self-assessment of Antarctic tourism *organisers* was mostly backed up on an analytical level by the *regulators* and *monitors* interviewed. There was a unanimous agreement amongst both groups that IAATO played an important and positive role in Antarctic tourism regulation. IAATO members were regarded as tourism experts (R2, M2), who were very proactive (R1) and, in the main, “as conscientious as it [wa]s possible for them to be”(M3).

Despite their respect for and recognition of IAATO's achievements, the *regulators* and *monitors* expressed reservations about the capability of a self-regulatory regime to effectively and sustainably manage Antarctic tourism. There were practical limitations of the degree to which the operators could self-regulate (M3). It was pointed out that with increasing numbers of tourists visiting Antarctica and a growing number of non-IAATO operators running tours in Antarctica, a problem could arise and a “unifying force, ... a unitary regulation structure” (M3) might be needed.

⁵⁶ The annual dues payable depend on the membership category of the respective tour operator and range from US\$ 750 to US\$ 2,000. The passenger fees amount to US\$ 15 per passenger (IAATO, 2008b).

One *organiser* confirmed this concern about growing numbers of large companies and those operating outside of IAATO (O8). He claimed that although, at the moment, the operators, and “especially the staff on the ground, ha[d] Antarctica’s best interests at heart” (O8), this could change as increasingly large companies merely focusing on profits or operating outside of IAATO entered the market (O8). By the same token, it was noted that although it was a good idea to have an association of operators with duty and care, the question was how long this would be viable, particularly if larger ships operating outside IAATO visited the Antarctic in increasing numbers (M3).

Despite the motivation of the *organisers* to apply rigorous guidelines and self-administered rules, it had to be proven whether Antarctic tourism practice reflected high ethical standards. The question of how the passion and love for Antarctica and its environment, that the operators claimed to be guided by, influenced decision making and behaviour *in situ*, needs further study.

Questions about the practice of tourism and related problems were answered as determinedly as the ones about the advantages and disadvantages of a self-regulatory regime. A picture was painted of a responsible and dedicated staff enthusiastic about bringing Antarctica closer to the tourists while conserving the environment and implanting a care and love for the place in their passengers (O3, O4, O5, O6, O9, O10). As explained by the tour operators, the tourists generally seemed to have a profound appreciation of the Antarctic wilderness and were keen to do their share to keep it (relatively) pristine (O10). Their motivation to comply with the guidelines was primarily rooted in an emotional connection with Antarctica. Asked to describe this very motivation, one expedition leader mentioned that it is due to

the love of Antarctica, really. Again, many of them come down knowing that it is such a wonderful place, but it is also part of the selling job expedition leaders and lecturers have to do. We have to sell this as the last place; this is it, you know. And it is that side, if you like, that does protect it, because people realise that they are in something that is very, very special, and they have to behave, basically. (O6)

There was a general willingness to abide by the guidelines, particularly if the reasons for having the guidelines in place were explained. Serious infringements of the guidelines were infrequent (O6, O8, O9, O10) as most passengers were very respectful of the environment and receptive to codes of conduct (O9, O11, O12). Minor incidences, such as individual tourists getting too close to the wildlife, occurred though but were relatively unusual and not intentional (O4, O9). The *organisers* confirmed that there were mechanisms in place that sanctioned passengers who overstepped their limits repeatedly (O3, O6, O8, O9, O10, O12).

Half the passengers act as police as well. They might not confront someone directly, but they will tell us, and we all have radios. Somebody does it once, you remind them and you see a pattern and you go and stick it to them. You know, we have threatened people that they have to stay on the ship, if they do this again and that is pretty effective. (O3)

Other operators confirmed the effectiveness of the aforementioned enforcement mechanism (O8, O9, O10, O12), and to passengers the threat of having to stay on board for the remainder of a cruise was mostly effective enough to keep them from further breaking the rules (O9, O12). Yet, one operator confirmed that they had to resort to this drastic measure with people who were particularly troublesome (O8).

A policy-maker, who had been to the Antarctic on tourist vessels, acknowledged the diligence of staff on tourist vessels and the responsiveness of tourists to reprimands (R1). She stated that although minor issues might come up, they did not develop into problems thanks to the vigilance of the tour operators and the basic desire of tourists to behave in a responsible manner (R1).

I think most people want to do the right thing. The tour ships do a good job of educating them, but you get some photographer who wants to get close, too close. There is a lot of peer pressure from the other passengers, which is interesting. There is a lot of vigilance with the tour operators. (R1)

The cooperation and communication among expedition leaders worked extremely well (O9, O10, O12) due to the dedication and experience of the staff on Antarctic expeditions (O10). Effective communication between vessels not only safeguarded the wilderness experience for the tourists, it also reduced the risk of serious accidents as hazard information and expertise was shared among vessels.

According to the interviews, Antarctic tourism practice largely seemed to coincide with the conscientious ethos to which Antarctic tourism *organisers* subscribed. This would imply that the current level and nature of Antarctic tourism might still be efficiently controlled through the existing combination of ATS governance and self-regulation. As outlined in the previous section though, Antarctic tourism is not likely to remain at the current level. Therefore, other regulatory mechanisms may have to be introduced and will be discussed at a later point in this Chapter.

5.4 Perspectives on Antarctic tourism regulation through the Antarctic Treaty System

It is the obligation of governments to regulate. ... The governments would never want to give up their control of the process. (R1)

Regulatory options to be considered would almost certainly involve the ATS, as the *regulators* were not willing to give up the final responsibility for controlling Antarctic tourism. Although this view was not shared by all *organisers*, there generally seemed to be an acknowledgement of the importance of the ATCPs as the legitimate gatekeepers to Antarctica.

The *regulators* shared the opinion that the ultimate responsibility for managing Antarctic tourism and final decision-making power would, and should, remain with the ATCPs (R1, R2, R3). This view was supported by the representatives of environmental NGOs (M1, M2, M3), who praised the success of the ATCPs in dealing with issues in a constructive, effective, creative and flexible way (M1, M2). However, this flexibility did not include the suppleness to react quickly to developments, as the ATCPs were generally considered as being quite slow in responding to upcoming issues (Huber 2006). One *regulator* regarded the lack of means to make decisions intersessionally as the main reason for the slowness of the ATS in reacting to developments (R2). While the consensus process and the considerable number of Parties involved in decision-making contributed to slowing the system down (R2), a consensus rule helped more than it hampered as it implied reaching an agreement instead of a compromise. Therewith, the consensus rule was said to result in greater dedication to a decision reached and to facilitate implementation by all ATCPs (M2).

The ATS was regarded as the currently most feasible and readily available tool for regulating Antarctic tourism.

[The ATS is] the best immediate, potential mechanism through which to regulate it. One can say it doesn't regulate it very well right now, but it is potentially able to regulate it. When you look around and look at the alternatives, they are fairly few and far between. (M3)

This confidence in and positive assessment of the ATS in relation to tourism regulation was opposed by a generally more critical, though not nearly as unanimous, view from the *organisers* of Antarctic tourism. Some *organisers* considered the ATS a very positive and admirable international regime with respectable goals (O5) and as the legitimate international gatekeeper to Antarctica (O2), which should be maintained as an international system because of regulatory power and the 'teeth' it had (O6). The scrutiny Antarctic tour operators were exposed to through the ATS resulted in safer vessel operations in the Antarctic (O3). These statements seemed to imply that the importance of the ATS as a governing body was recognised, although some criticism was voiced regarding the following issues:

- the lack of "mechanisms to deal with issues in practice" (O2),
- the apparently unequal application of two different sets of standards and rules to tourism and science (O3, O9), and
- the existence of distrust towards an industry association (O7).

The underlying distrust that ATPs seemed to extend towards an industry association was reciprocated by a tour operator (O8) with respect to governments. The main criticism this *organiser* offered in relation to Antarctic tourism regulation through the ATS reflected his doubt about the flexibility of governmental regulation and the lack of ATS support for IAATO.

[T]he major flaw [in the current regulatory regime] is that it is governments that are doing it. The governments think in absolutes. Governments only think in open and close, they don't think in half measures. (O8)

One of the reasons for governments to want for flexibility with respect to Antarctic tourism regulation was seen in their lack of expertise (O7, O8, O10). As a case in point, it was mentioned that governmental observers taken on tourist cruises were not only expensive, especially for the smaller ships (O12), but were also of limited value as many of them lacked Antarctic experience (O8).

A tour operator lamented that the ATPs did not appear to have good suggestions on how to regulate Antarctic tourism and did not properly implement the rules they had agreed upon (O10). It would be a major step forward if the ATPs designed a more consistent and stronger national permitting process and actually controlled compliance with visitor guidelines to a greater extent (O10). It was surprising to see that, contrary to common belief, some tour operators endorsed stricter enforcement of the current regulation. A possible explanation for a desire for stronger enforcement might be the fact that these IAATO members were highly confident regarding their compliance with existing regulation and their diligence to minimise and control the environmental impact of their operations. Consequently, these operators might then want all other operators fulfilling the same standards.

There seemed to be a dichotomy between science and tourism, which was expressed by one *organiser* as “there is science and there is tourism” (O7). One operator argued that science caused greater impacts on the environment than tourism (O8, O9), and some science was to support sovereignty claims rather than to pursue research interests (O9). Science was endorsed by the ATS as one priority of managing the Antarctic continent (R1, R2, M2, M3), backed up by Article 3 (3) of the Protocol. On the other hand, tourism, although accepted as a legitimate activity (R1, R3, M2, M3), was largely seen as a ‘contingent activity’ (M3), which was open to scrutiny on the grounds of the “capacity to make very moral judgements about the acceptability of impact based on other criteria than [we]re currently encoded in the Antarctic Treaty System” (M3). Reserving room for such value judgements would open further avenues within the ATS system to discriminate against certain forms of tourism or specific activities, which were deemed unfit for the Antarctic environment.

5.5 *Internal and external cooperation*

One would like to think that there is a desire to do what is right and to be at harmony with the place. (O5)

In order to judge the extent to which the current and future regulation can be successfully enforced, it is important to gain some insight into the level and effectiveness of cooperation and communication between the *regulators* and *organisers* of Antarctic tourism and internally within these two groups. As the *organisers* are the main ‘enforcers’ *in situ*, the question arises to what extent they feel compelled to abide by rules and regulation imposed by the ATCPs, whether they are involved in the discussions, and whether the rules, recommendations and guidelines are communicated effectively.

The policy-makers (R1, R2) shared the opinion that within the ATS, the Treaty Parties cooperated well. There appears to be familiarity and collegiality among the ATCPs, which made the ATS a model of cooperation and a precedent for many other treaties (R1).

There is a lot of give and take at the meetings. It’s in some ways kind of a club. People go there and everyone knows each other. We all work very collegially, and there is a great deal of cooperation. It starts right at the foundation of the science programs and works its way ... up through the political process. (R2)

Similarly, the cooperation among the members of IAATO was judged by the *organisers* as working very well (O1, O4, O6) and “amazingly good, ... pretty much to the point of altruism” (O4).

I think the cooperation between the members is increasing and maturing. ... The inter-connectiveness and the understanding of the issues is cleaner and clearer. I saw in the meeting we’ve just had a diminishing of self-interest, of individual self-interest. (O2)

The *organisers* argued that the cornerstones of the good cooperation were defined by

- a shared passion and ‘love’ for the Antarctic (O4),
- shared ethics and values (O10),
- well-established communication (O1, O6, O7),

- a 'constant effort' by the members to learn and adapt to new situations (O7), and
- peer pressure (O4, O5), which was beneficial in terms of imposing and complying with strict guidelines (O5).

The cooperation between the ATCPs and IAATO was seen with varying levels of satisfaction, which ranged from extremely good (R1, O1, O4, O10, O11) to generally quite good (R2, O5, M2) to "improving" (O6), "deepening and maturing" (O2) to "actually could be improved" (O7). However, most of the interviewed stakeholders claimed that there was healthy communication (O2), transparency, openness (M2) and mutual respect (R2, M2, O2, O4) although the relationship had started rather "antagonistically" (O2). IAATO's "opinions [we]re valued" (R2) and the tourism statistics they compiled along with the efforts they put in to enforce tourism guidelines (M2) were recognised and appreciated.

However, despite IAATO's work being respected, in the eyes of some tour operators, as an organisation IAATO was still not appreciated enough by the ATCPs (O8, O10).

IAATO is trying, it is working there, but it is up against a barrier [as] it has no regulatory ability. ... Government[s] ... in general are very bad at communication and cooperation. They don't work with, they just work for their own personnel. (O8)

The above statement emphasised the point that IAATO tried to work with the governments – particularly as the organisation had not been given the authority to take the regulation of Antarctic tourism into its hands (O8) – but it still lacked the power to do so. An apparent distrust by governmental authorities towards an industry organisation tainted what could be a strong partnership.

Generally, the cooperation between the ATCPs and IAATO tour operators was viewed as being more positive by the *regulators* than by the *organisers*. The latter expressed opinions in this regard that ranged from acknowledging that the cooperation was great to suggesting that it needed improvement. As most of the participants were of the opinion that there was a mutual respect, there seemed to be a good basis for a cooperative effort towards an effective tourism regulation and practice.

5.6 An envisioned Antarctic tourism regulation from the viewpoint of the participants

My own view on tourism is ... that it is a legitimate activity, that it should have not more than a minor or transitory effect. I would not see that it should be encouraged or discouraged ...; it can be managed so that it is sustainable. (M2)

Based on the results presented in the previous sections as well as on statements given by the participants directly in response to the question what kind of regulatory regime they would envision to be the ideal one for Antarctic tourism, the following main conclusions can be drawn. There was a recognisable divergence, between the *organisers* of tourism on one side and the *monitors* and *regulators* on the other, on how Antarctic tourism should be regulated. The tour operators favoured a system with a strong and influential industry self-regulation backed up by the ATS where necessary, whereas the *regulators* and *monitors* preferred a robust ATS with the ultimate responsibility for decision making over the regulation of Antarctic tourism. These views are illustrated in the next two sections, followed by an

overview of where the participants could be positioned in a diagram contrasting power and influence of ATS regulation with IAATO self-regulation.

5.6.1 Perspectives of tourism organisers

The views some operators expressed on an effective regulatory regime approached the position of the *regulators* and *monitors* by stating that the ATS should remain strong in the future. A few operators did not even consider regulatory options without the input of ATPs (O5, O8, O10, O11). Generally, it was emphasised that regulation from the ATPs was needed (O5, O6, O12) alongside IAATO's self-regulatory guidelines (O12). However, this general observation stood in stark contrast with a belief expressed by one tour operator that the trade could regulate itself and that consequently no restrictions in numbers of tourists visiting the Antarctic continent should be imposed.

I don't believe that restrictions by the government will be advisable. After all, I believe in free trade, and if free trade is practiced in an ethical and responsible way, there is no need for the introduction of governmental international treaties. (O1)

This view was unique among the study participants as generally some ATS regulation was considered either desirable or necessary, or both. Nonetheless, the current regulatory regime was regarded critically with specific reference to the lack of effective mechanisms for monitoring operations and policing infringements as well as to the lack of enthusiasm regarding Antarctic tourism and its regulation. It was mentioned that principally the ATPs were not interested in assuming responsibility for regulating tourism as there would not be sufficient mechanisms in place to do so. A self-regulatory regime with linkages to the ATS might provide an effective tourism regulation system for the Antarctic.

I think that overall at present the Antarctic Treaty System does not want to take on regulation of Antarctic tourism. They don't want it. They would like it to be self-regulated. ... One, because they don't think the Antarctic Treaty System has got the mechanisms to do it, and two, because they think that the self-regulation model can work with appropriate checks and balances. (O2)

As the ATPs were closely monitoring the work of IAATO, and as they had the ultimate power to intervene, they would do so had they the impression that IAATO did not do a good job (O4). It was argued that consequently, more restrictive policies were not needed (O4). The *organisers* explained that self-regulation provided an easier and faster way to communicate and implement decisions and, as a result, had merit as a regulatory system for Antarctic tourism.

Certainly, at its current scale, self-regulation is an ideal solution because it is so efficient and because it is so fine-tuned. It is so sensitive to our circumstances. We don't wait for all the Treaty Parties to ratify that 'no-you-can't-walk-that-path', or you know. We just say, '*Oh, this path, we are not going to use that anymore.*' All the expedition leaders get notified, '*You don't use that path anymore, you don't use that landing site anymore. You go over here instead.*' ... Self-regulation is great, as long as everyone plays the game. Now, pretty much everyone does. (O3)

The question was to what extent everyone currently 'played the game', particularly since IAATO was not all-embracing. Whereas IAATO accounted for a large part of Antarctic tourism (more than 80 percent as claimed by O3), IAATO did not embrace all of Antarctic tourism. Two companies operated large ships in the Antarctic outside

the IAATO framework and a number of small yacht operators or independent expeditions were not organised under the umbrella of IAATO. The lack of an obligation to be a member of IAATO as a prerequisite for being allowed to operate in Antarctica was seen as one of the main problems (O9). Often, non-members applied IAATO guidelines and incorporated briefings introducing IAATO codes of conduct and visitor guidelines to the passengers (O12)⁵⁷. The passenger briefings on the two big non-member vessels were almost identical to the IAATO briefings. These were only slightly altered to accommodate the larger scale of the operations (O12). Nevertheless, there was a reason for concern, as there was neither a feasible way of monitoring non-member operators nor a mechanism in place to stop them.

Many of the non-members apply IAATO guidelines, but there are again this group ... that come down, which just seem to be totally and utterly outside of everything. And they are a concern ..., because they are big enough to have an impact, and there doesn't seem to be any way of checking or controlling their activities. (O6)

In order to gain leverage, at least over the large operators that were currently outside the self-regulatory system, it was proposed that they needed to be incorporated (O1). As it "ma[de] good business sense" to join IAATO (O4), the incorporation of these large non-IAATO operators was said to be just a question of time (O2, O3, O10, O12).

As already mentioned in the previous section, most *organisers* not only wanted IAATO's self-regulatory efforts to be acknowledged by the ATCPs, but also wanted to state their case for more active support in regulating tourism from the ATCPs. This support should go beyond an official approval of IAATO's policies and should incorporate the delegation of regulatory power to IAATO to some extent (O8). In order for IAATO to have teeth, legal backup from ATCPs would be essential (O10). This legal backup could be achieved through strictly regulating station visits and, for instance, allowing only IAATO members to visit research stations in Antarctica (O8, O10). Moreover, ATPs could implement more stringent port-state jurisdiction, which might involve the prohibition of non-members of IAATO leaving for Antarctica from ATP ports (O8).

One *organiser* provided the following rationale behind the necessity of delegating more power and responsibility to IAATO:

At the moment, if I am an IAATO member and I break the rule, what is going to happen to me? Nothing, because there is nothing IAATO can do. ... [L]ook at the problem that IAATO is faced with. I expel you and you are still going to operate. Are you better on the inside or the outside? You break the rules, sure they will give you a slap on the hand, but then they go, '*Oh, but we are better off to have you in the fold than outside.*' So, if you expelled me, I would say, '*oh well, I will carry on.*' So, where is IAATO's strength? The governments haven't given [IAATO] the ability to regulate, so how can it possibly. (O8)?

The above statement is a good reflection of the dilemma that IAATO faced when one of their members appeared to disregard regulations on waste disposal in the Antarctic Treaty area during the 2006/2007 season. Although the evi-

⁵⁷ Conversations with Antarctic tourism stakeholders attributed the decision of the two large non-member companies to operate outside IAATO mainly to personal differences and differences between company owners/managers and IAATO officials (O12). Over the years, the two large companies did not seem to see the need anymore to become an IAATO member. Early in 2008, one of the two non-IAATO member large vessel operators sold its expedition ship and left the ranks of Antarctica tour operators.

dence was inconclusive, written and witnessed statements by the expedition leader, the assistant expedition leader and ice master of the respective tour operator indicated a clear and deliberate violation of the Protocol and IAATO guidelines (7 Seas Consulting 2007; KZ Expedition Consulting 2007). These statements were circulated among IAATO members and ATCPs, which damaged the company's reputation and placed stress on IAATO's regulatory capacity as observed by the author during the 18th Annual General Meeting of IAATO in 2007. During the 18th IAATO AGM, this incident was discussed in the open forum as well as within a members-only session. Despite the lack of an official statement, the remarks of meeting participants hinted that the respective company had been reprimanded and put on a quasi-probational status. Although the IAATO membership directory continued to list this quasi-probational member as a full member, the company would have to take an IAATO observer along in the next season and would only regain voting rights within IAATO once a satisfactory observer report is filed (IAATO 2007e).

In order to deserve legal support from the ATCPs, "IAATO itself would have to pick its act up a bit and become a lot more responsive and responsible" (O8), although according to this operator, the crux of the problem remains to rest within IAATO's lack of sanctioning power (O8).

A number of further suggestions, which would improve current regulatory mechanisms, were made by the study participants. At this point, a listing of these suggestions shall suffice as they will be discussed in greater detail in Chapter 6.

- Regularly having independent observers on board of IAATO vessels would be very beneficial (O8, O9 O10), as it is already an observer's presence that often makes the difference (O9).
- The adoption and implementation of an accreditation scheme would be equally beneficial as under an accreditation scheme even long-standing members of IAATO could come under scrutiny again (O10).
- A designated staff-training programme should be implemented by IAATO to achieve general standards among expedition staff (O10). However, problems could be expected as some of the seasoned expedition leaders might not want to go through an official training programme (O8). There has to be a 'grandfathering system' to some extent (O8), and maybe even a requirement of a minimum number of years of experience in Antarctica for expedition leaders (O8).
- A better regulation of the vessels themselves and the adoption of a standard for ice-strengthening might be necessary (O8).
- A higher staff-to-tourist ratio (than the current ratio of 1:20) during landings might be needed to adequately monitor the behaviour of tourists on shore (O8, O9, O12).

The current desire of ATCPs to design boardwalks – as had, for instance, happened on South Georgia (McKee 2007) – was met with mixed feelings among the *organisers* as boardwalks might destroy the intrinsic values of the wilderness (O10, O11, O12).

Instead, one operator suggested a more drastic measure to preserve the Antarctic environment. He recommended closing off the largest part of the Antarctic Peninsula (O11). Twenty to thirty landings sites that were a good representation of Antarctica's flora and fauna could be re-opened for tour operators (O11). Not surprisingly, this idea did not find sufficient support among other IAATO members (O11).

Generally, operators preferred a site-specific tourism regulation, which might allow visitor numbers to be controlled in a highly specific and eco-centric manner. So far, the site-specific guidelines that had been endorsed by the ATCPs for selected sites work well – they were fair, easy to understand and left enough room for operators to incorporate an adequate number of landings at points of interest in their itineraries (O9).

From the viewpoint of the *organisers*, effective mechanisms to regulate Antarctic tourism exist within the self-regulatory system, which should ideally be supported by the ATS providing general guidance. Although expressing some concern about large ships operating outside IAATO, the general understanding appeared to be that these issues would eventually be dealt with by including these operators in the self-regulatory system. One might argue that accommodating these operators could result in a lowering of standards within the self-regulatory regime, which would potentially lead to its failure to maintain the high environmental quality of frequently visited sites. A sole reliance on self-regulatory mechanisms might not be sufficient to address future developments of Antarctic tourism adequately as already discussed in relevant literature (Enzenbacher 2007; Molenaar 2005; Bastmeijer & Roura 2004; Tracey 2001; Richardson 1999; Johnston & Hall 1995; Enzenbacher 1992b). This was also realised by the *regulators* and *monitors*, who did not want to delegate the regulation of Antarctic tourism in its entirety.

5.6.2 Perspectives of regulators and monitors

Despite recognising the role IAATO played in the practical management of Antarctic tourism, all the *regulators* and *monitors* stressed that tourism regulation should definitely rest with the ATCPs. Although there was some critique on the non-binding character of most of the Antarctic Treaty regulatory mechanisms (Bastmeijer & Roura 2004), it was indicated that ATS recommendations and guidelines might, and would have to, suffice (R1, M1, M2). First, it would be difficult to get agreement on rules (R1); second, most Parties tried to comply with international agreements even if the regulations were non-binding (M1); and third, practical implementation and enforcement were the most important issues no matter whether the respective regulatory instruments were binding or not (M2). As the *regulators* (R1, R2, R3) and one *organiser* (O5) realised, enforcement and monitoring would always remain difficult because of national differences (R1, R3) and because of the lack of an Antarctic police or enforcement agency (R2, O5). Effective monitoring on the ground and on a continent-wide basis did not seem to be feasible because of the resources and costs involved (M2, O7), but it might be manageable on the basis of individual sites (M2). This view was supported by another NGO representative who stated that monitoring had to be dealt with on a regional or sub-regional basis.

For tourism-associated impacts and so on, the obligation might well be imposed over the entire region, but it would have to be dealt with in more manageable lumps. I think it would have to be dealt with in a regional or sub-regional way. The mechanics of doing it would be at a smaller scale than the general obligation. It isn't quite as complicated when you look at it at the moment, because most of the activity is at the Northern/Western side of the Antarctic Peninsula. (M3)

Monitoring and policing could be achieved through public awareness and blacklisting certain vessels that had not complied with the rules (M1). It was further suggested that mechanisms under international law dealing with port-state jurisdiction and flag-state implementation had to be strengthened (M1, M2).

In any case, as it would be difficult to set up effective monitoring programmes, it appeared that the ATCPs would have to rely upon the goodwill of the operators and their self-interest to maintain the environmental integrity and attractiveness of the sites.

So, at the moment, to some extent we are relying upon the goodwill of the tour operators. Now having said that, we all need to recognize too that it is in the operators' best interest, their own business best interest to make sure these sites are clean, attractive, unspoiled because that is what people want to see. If they were causing damage to the sites, it is not in their own interest to do that because it will hurt their business. (R2)

This argument seems to support the perspectives of the tourism *organisers* who emphasised the potential to monitor compliance with Protocol provisions through self-regulation (O2). They argued that self-regulation was reinforced through a self-monitoring system of mutual observation (O4, O6), self-criticism, peer pressure and ultimately the possibility of putting non-compliant IAATO members on probation (O4).

The general opinion of the *regulators* and *monitors* confirmed that the ATS should be the backbone of Antarctic tourism regulation and that the self-regulatory system should support enforcement and implementation based on the self-interest of operators to maintain the quality and value of their 'product'.

5.7 A stakeholder framework

No snowflake in an avalanche ever feels responsible. (Voltaire n.d.)

There was a divergence between what tourism *organisers* and *regulators/monitors* envisioned as an effective regulation for Antarctic tourism. Based on the interviews, individual participants were located on a planar space contrasting the strength and intensity of ATS regulation with varying degrees of IAATO influence on political decision-making on Antarctic tourism as shown in Figure 5.7.1. Figure 5.7.1 shows that the Antarctic tourism industry does not represent uniform viewpoints and that some tour operators would opt for a greater level of ATS regulation should the future development of Antarctic tourism demand it.

The positioning of the participants in Figure 5.7.1 is the result of a qualitative comparative process during which each participant's statements addressing issues surrounding regulatory powers and responsibilities of Antarctica tourism stakeholders were compared against each other. The participants' views were then internally ranked in two dimensions – with respect to the regulatory power they would like the ATCPs/ATS to assume and with respect to the influence in decision-making that IAATO should have.

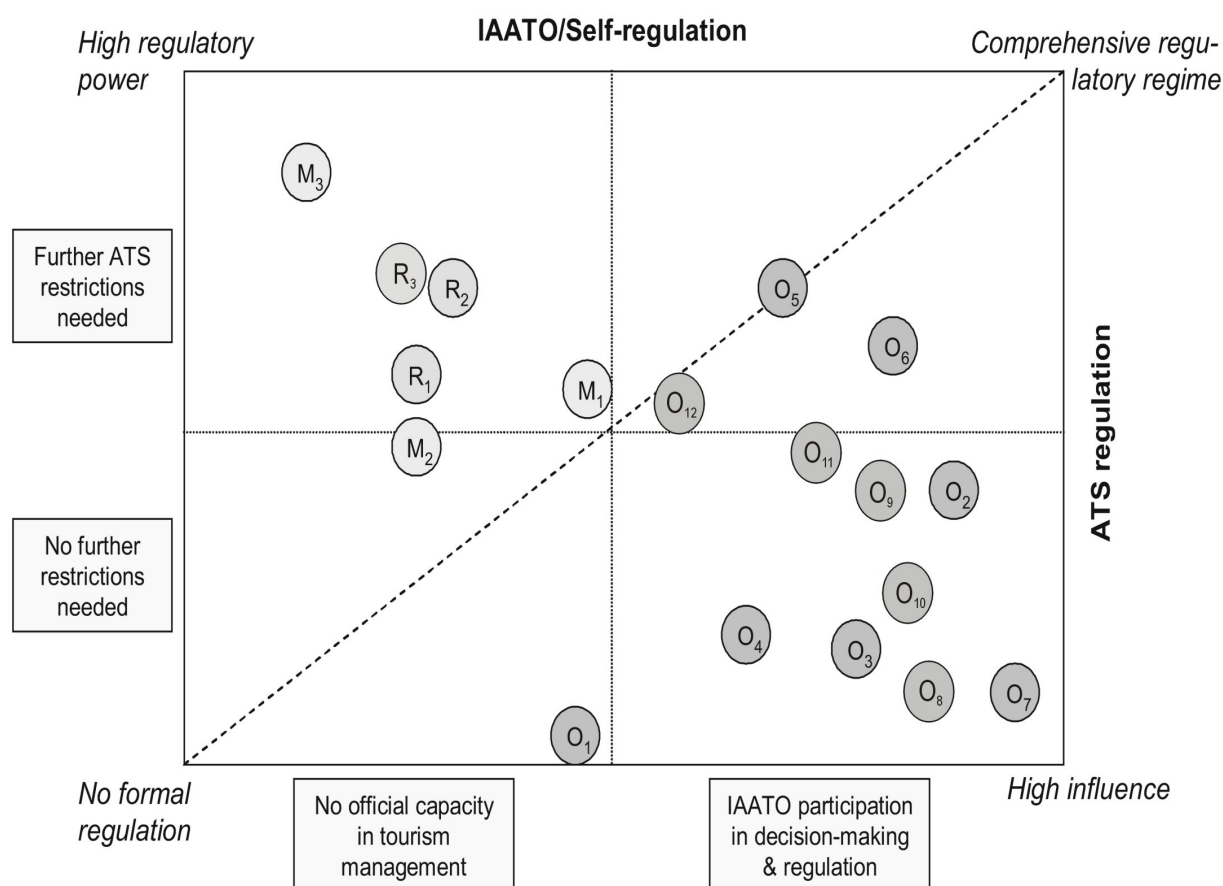


Figure 5.7.1: Positioning Antarctic tourism stakeholders regarding their views on responsibilities for decision-making

The *organisers* of tourism covered a relatively wide-spectrum from strong regulatory-minded views calling for further restrictions imposed by ATCPs (O5, O6, and O12) to views supporting free-trade without significant formal ATS regulation (O1). One of the *organisers* emphasised that IAATO “need[ed] to be an equal partner in discussions” (O7), which, in effect, referred to a desire for strong involvement in political decision-making. This could potentially pose a problem as sharing decision-making power might make IAATO into a political institution participating in Antarctic policy, which was not the intention when IAATO was founded.

On the other side of the continuum, *regulators* and *monitors* generally believed in a strong Antarctic tourism regulation through the ATS. Whereas the *regulators*’ opinions were relatively similar, those of the *monitors* varied particularly on the question of whether further restrictions were needed. One of the *monitors* explained that rather than drafting new rules and guidelines, those currently existing should be properly and effectively implemented (M2).

5.8 *The final ends and means of Antarctic tourism regulation*

The Antarctic Treaty System is the international gatekeeper. But the Antarctic Treaty System is a diplomatic, liberal policy-making institution. I don't think it has the mechanisms to deal with the practicalities of the set of problems. It can synthesise. (O2)

Respondents commonly agreed that eventually the growing numbers of tourists visiting Antarctica would need to be addressed (M1, O6), as the environmental consequences were likely to become more severe (R2, M3). This could initially be done through self-regulatory measures limiting the number of people ashore, the places they went or the time they spent there (M1). The ATCPs might want to enhance the site-specific guidelines and use Antarctic Specially Protected Areas (ASPAs)⁵⁸ and Antarctic Specially Managed Areas (ASMAs) more widely for tourism regulation in lieu of mandatory guidelines (M2). An *organiser* argued that “there has to be a cap on the number of ships in the not too distant future” (O6) in order to prevent accidents and overcrowding at landing sites with the associated impacts. Likewise, one of the representatives of environmental NGOs called for a discrimination against certain types of tourism activities and a cap on numbers, although it remained unclear whether this cap should be applied to the numbers of tourists or ships (M3).

One needs to find ways to practically constrain the activity. I think it means a cap on numbers, but when I say that, I don't suppose that is the only thing we should be concerned about. ... there maybe certain sorts of tourism activity which are so problematical, in principle problematical, that they should be prohibited. ... It is not to say that we prohibit all tourism or most of it, but we might say that there needs to be some standard of Antarctic-connected specifically justified tourism. (M3)

On an ethical level, it would also have to be determined what the future should hold for Antarctica and who should be privileged to visit the Antarctic (O11). The importance of aesthetics would have to be discussed with regard to tourism as much as to science and research facilities (O11).

However, the *organisers* made a strong case regarding the creation of ambassadors for the Antarctic through tourism. The following quote represents an example of the general position of tour operators in this respect.

There needs to be a constituency for places and part of that is letting people visit them and seeing a picture of them. Not everybody can afford to do that, so there is a limitation on numbers for Antarctica. I firmly believe that it is important that there is a constituency, and not just of scientists, but ordinary people who can afford it. (O12)

Ideally, the overall goal of tourism regulation should be the protection of Antarctic wildlife, because as this *organiser* put it,

I don't think tourism should dictate the Antarctic, the Antarctic should dictate tourism. (O5)

⁵⁸ Clark & Perry (1996, p. 317) maintain that, although a comprehensive management scheme of ASPAs is called for, ATCPs will be reluctant to designate any one body to overtake the comprehensive management of the ASPAs because of funding and sovereignty reasons. Therefore, the CEP, SCAR and the SCAR Group of Specialists on Environmental Affairs and Conservation – as a SCAR instrument – will be best placed to continuously and collectively manage the ASPAs. Post-visit reports will help documenting activities in ASPAs (Clark & Perry (1996, p. 317).

The best possible mechanisms for tourism regulation should be agreed upon – “if that was IAATO, fine. But you needed to actually test that assumption” (M3) whether IAATO represented the final ends and means of effective self-regulation.

5.9 Concluding thoughts

Faced with a continuing burgeoning tourism industry which is to a substantial part operated within the purview of Third Party states, ATCPs must either relinquish any idea of formal regulatory control (at least over that sector of the industry); rely instead solely on self-regulation though, as indicated, that is looking more tenuous with newer, larger vessels now operating outside of IAATO, or embrace more innovative means of regulations. (Richardson 1999, p. 16)

Drawing on the results of the interviews, one can conclude that an effective Antarctic tourism regulation should be primarily built upon regulatory mechanisms that already exist within the ATS or through IAATO and other bodies such as the IMO rather than through new regulations. The question is whether restrictions of access that may be needed as a response to increasing pressures by growing numbers of tourists and ships, could be incorporated in the existing and expanding system of site-specific guidelines as well as designated ASPAs and ASMAs. One could argue that aside from the capacity of the Protocol (Annex V) to exclude specific areas from human impact by establishing ASPAs, there may be the possibility to exclude certain activities through the EIA provisions of the Protocol. The latter could be achieved through a more stringent EIA permission process, which would place the responsibility of enforcement into the hands of the individual ATCPs. Due to different national interpretations and varying levels of implementation of the EIA procedures outlined in the Protocol (Enzenbacher 2007; Tracey 2001; Kriwoken & Rootes 2000), this mechanism may not be very effective. For some time, researchers have pressed for more stringent enforcement of Protocol provisions by national authorities (Enzenbacher 2007; Hemmings & Roura 2003; Kriwoken & Rootes 2000) and for additional mechanisms to relieve EIAs from bearing the main burden regarding the regulation of Antarctic tourism (Hemmings & Roura 2003). As indicated in the previous section, this could potentially be achieved by increasing the number of strict site-specific guidelines, which could specify how many people are allowed to engage in what kind of activities for how long and in which areas. An effective dissemination of these guidelines, implementation and enforcement are crucial, particularly because currently it is not feasible to agree on binding rules as was argued by some of the study participants.

The *regulators*, *monitors* and *organisers* of Antarctic tourism confirmed that the implementation, enforcement and monitoring of existing as well as potential future recommendations and guidelines – be they of binding or non-binding nature – remains an obstacle. Prosser (1998) relates this to the lack of police or other enforcement agencies in Antarctica and confusion about who should assume the responsibility for monitoring. It seems that the *regulators* need to rely on the goodwill and conscientious practice by the tour operators. As outlined by all three stakeholder groups interviewed, and supported by Murray & Jabour (2004) and Riffenburgh (1998), Antarctic tourism is generally regarded as being practiced in a commendable manner. Overall, a high level of acceptance of and compliance with guidelines and regulations by tourists can be observed (Cessford 1997). Antarctic tourism practice still seems to be primarily driven by a cooperative approach of the tourism industry anchored by principles put forth in the ATS.

On a more behavioural level, the cooperative approach by the industry can be explained by the psychology of peer pressure. A recent study by Goldstein & Cialdini (2007) analyses self-awareness, self-perception and the likelihood of people imitating the behaviour of those with whom they share a perception of merged identity. Goldstein & Cialdini (2007, p. 402) concluded that a person's freely chosen actions are likely to be incorporated in the self-concept of observers who feel a sense of connection, for instance by holding the same profession, to the respective person. Because of an altered self-concept and changed perceptions, the observer is likely to imitate observed behaviour, provided it is not completely antithetical to the observer's own values and attitudes (Goldstein & Cialdini 2007, p. 415). The process of vicarious self-perception, as Goldstein & Cialdini (2007) termed the phenomenon, might have important implications for *in situ* management of Antarctic tourism. Applied to the Antarctic tourism arena, vicarious self-perception might explain the strong peer pressure felt among IAATO tour operators and their dedication to be 'good neighbours'. An early example of good practice in the field of Antarctic tourism – the Lindblad model – set the precedence for what was later to become IAATO's codes of conducts and visitor guidelines. Encouraged through Lindblad's environmentally sound operational procedures, other tour operators followed suit and adopted similar attitudes and values, a process that reinforces the applicability of Goldstein & Cialdini's (2007) model to Antarctic tourism operations. The realisation and recognition of the applicability of the model might be beneficial to the enforcement of regulatory mechanisms and to conducting environmentally conscious tourism in general. The imitation of good practice could be encouraged by ATPCs through positive reinforcement, i.e. through overtly respecting and advertising good practice. The functional benefit of advertising good practice taken up by a person's peers is confirmed by another study conducted by Goldstein *et al.* (2007), which analysed motivational aspects of hotel guests reusing their towels to benefit the environment⁵⁹. Earlier research by Kandel & Lazear (1992), elucidates that peer pressure can be an effective motivator in for-profit organisations. Kandel & Lazear (1992, p. 816) argue that peer pressure along with mutual monitoring results in greater effort and less free-rider problems in organisations. As ecotourism operators are concerned, Sirakaya (1997) concludes that key methods for increasing compliance with ecotourism guidelines lie in raising the awareness of operators through education and addressing their conscience. Bad publicity is associated with high costs and loss of customers, which ecotourism operators would not want to incur (Sirakaya 1997, p. 944). As the interviews have shown, Sirakaya's (1997) observation is applicable to Antarctic tour operators as well, who seem to shun bad 'external' publicity as much as being regarded as 'bad neighbours' within IAATO. In lieu of binding Antarctic tourism regulations and considering the difficulties of monitoring and policing operations in Antarctica, the thoughtful utilisation of processes of vicarious self-perception might be regarded as a potential *soft* regulatory option.

On the ground, Antarctic tourism regulation could further be strengthened through the adoption of stricter IAATO guidelines regarding staff-passenger ratios during landings, designated staff training programmes and the encouragement of a 'grandfathering system' for expedition leaders, necessitating vessels to infrequently carry IAATO ob-

⁵⁹ Goldstein *et al.* (2007) found that peer pressure was more than 30% more effective in encouraging environmentally sound behaviour. Hotel guests were confronted with a note in the bathroom that read "75% of the guests who stayed in this room ... participated in our new resource savings program by using their towels more than once. You can join your fellow guests in this program to help save the environment by reusing your towels during your stay" Goldstein *et al.* (2007, p. 149). Compared to alternative descriptive methods merely directed at the guests' conscience to be environmentally friendly, this approach was by far the most effective in motivating guests to reuse their towels (Goldstein *et al.* 2007).

servers, as outlined by the study participants. Here, stronger support from the *regulators* is needed if IAATO is to be successful as, at the moment, the organisation lacks teeth.

It is yet to be seen just how long improvements in Antarctic tourism practice by individual operators will balance increasing numbers of tourists and ships. Although it has been offered by one *organiser* that on the side of the tour operators environmental consciousness will outweigh their business interests, this statement was not supported by any other participant of this study. The *regulators* suggested that it might not be in the commercial interest of the tour operators to damage the Antarctic environment. This is certainly a valid assumption from the current point of view, which implies that Antarctic tourists are generally interested in seeing a relatively pristine and wild environment. The common basis for a proactive approach by the operators and the willingness of *regulators* to involve the tourism industry appears to be the underlying self-interest of the industry to practice environmentally conscious tourism and the realisation of the *regulators* that this self-interest works in their own best interest as well. Interestingly, it was this self-interest, which quite a number of *organisers* downplayed or even denied. This altruistic picture of the self-regulatory regime as created by some of the *organisers* might not necessarily benefit IAATO considering that a strong argument for conservation out of self-interest would probably not only be well-received by the *regulators* and *monitors*, but would also be advantageous in the eyes of the public.

It seems that Antarctic tourism regulation and practice is strongly influenced by individual stakeholders and their dedication and passion. The participants of the study emphasised their profound love and care for the Antarctic – not only in what they said, but also in how they said it. This emotional connection to the Antarctic continent undeniably aids the protection of its environment. It remains to be seen for how much longer this emotional motivator to protect the Antarctic environment will dominate Antarctic tourism considering the increasing commercialisation of this sector with growing numbers of larger ships and tour companies securing their share of the market. The current strong environmental ethos and practice of Antarctic tour operators will be increasingly tested in the future by external pressures from NGOs and possibly ATCPs, and from inside the tourism industry as a result of the growing numbers of tourist visits and the diversification of tourist activities. A more consistent and thorough implementation of existing rules and guidelines along with an extended and flexible site-specific regulatory system appears to be preferable.

The kind of regulatory regime, which would mainly be driven by a strong ATS combined with a cooperative self-policing industry and more stringent enforcement mechanisms, has been envisioned as an effective regulation from the current perspective of most of the stakeholders interviewed. Such a regulatory regime is primarily based on existing regulatory mechanisms, which may have two different rationales. First, the current regime may be considered as having generally been a success in the past and as providing a suitable framework for addressing impending issues. Second, there may be limitations regarding the extent to which completely different regulatory regimes could be imagined by the participants, although due to the relatively small number of stakeholders interviewed, there may be some limitations in terms of the generalisability of this study. The study provides some insight in stakeholder involvement in Antarctic tourism by providing an approach that closely analyses the viewpoints and ideas of those involved in Antarctic tourism practice, regulation or monitoring.

These stakeholder viewpoints appear to confirm that, at the moment, the regulatory regime for Antarctic tourism is capable of addressing issues posed by tour operations in a flexible and adequate manner. Improvements could be made in terms of the comprehensiveness, applicability and the consistency of the practical implementation of the regulatory mechanisms. While sufficient for the time being, the status quo of Antarctic tourism regulation may not remain adequate and effective in the near future, when the continent is likely to be faced with a further increase in visitor numbers, the range of activities undertaken and the size of vessels sailing Antarctic waters. Emphasised in most interviews, this problem allows the conclusion that Antarctic tourism regulation has to be capable of reflecting and appropriately reacting to the development of Antarctic tourism in a timely manner. The stakeholders suggested that this could be achieved through site-specific guidelines and a cooperative approach of the ATCPs and the tourism industry. Beyond expanding the areas covered by site-specific guidelines, there is room for the development of other regulatory mechanisms. These mechanisms should be based on suggestions by as wide a range of stakeholders as possible as they are the ones who will ultimately determine the success and effectiveness in terms of the administration, implementation and monitoring of the regulatory instruments.

The suggestions outlined above represent first conclusions with respect to stakeholder concerns and praise regarding the current regulation of Antarctic tourism. Chapter 7 takes up these conclusions, views them against the backdrop of regime theory and incorporates the results from the Delphi study. This allows meaningful inferences on the overall effectiveness of Antarctic tourism regulation to be derived and informed suggestions concerning the future development of the Antarctic regulatory regime to be made.

CHAPTER 6



6 Where do we go from here? A discussion of results from the Delphi study

Tourism in Antarctica is a reality. In the end it is going to be like a national park. We can manage it, but we won't be able to just say no. (Mike Toner as cited in Polk 1998, p. 1402)

This Chapter details the results of the Delphi study offering stakeholder viewpoints valuable for the discussion and assessment of potential options for regulating Antarctic tourism in the future. The Delphi study provides insights into how the current policy problem is addressed, how rules and regulation are enacted and how tour operators comply with existing regulatory mechanisms. Aside from looking at the present practice of tour operators, the Delphi also sheds light on the position and behaviour of ATCPs with respect to decision-making on Antarctic tourism issues. Moreover, options for future regulatory instruments with an Antarctic tourism focus are being assessed from a desirability and feasibility point of view.

First, this Chapter discusses Antarctic tourism regulation in its current form from the viewpoint of Antarctic tourism stakeholders. In order to assess the effectiveness of the current regulatory regime on Antarctic tourism, the Delphi study contributes additional information on the main strengths and weaknesses of the self-regulation and regulation through ATCPs as well as on the success of the Protocol and various individual regulatory mechanisms. The Chapter goes on to illustrate how stakeholders anticipate Antarctic tourism to develop in the future along with their hopes and concerns regarding the future of Antarctica and Antarctic tourism. These insights into the anticipated future development of Antarctic tourism help discussing and assessing future regulatory options. In these three main subsections on (a) the current regulatory regime, (b) the development of Antarctic tourism and (c) future regulatory options, the analysed and categorised results of the Delphi study are presented. The concluding section then integrates these results into a brief discussion of the general characteristics of a desired regulatory regime for Antarctic tourism and potential future regulatory instruments. The Chapter concludes with some thoughts on the usefulness and applicability of a Delphi study in Antarctic tourism research.

As mentioned above, this Chapter presents a categorised discussion of stakeholder responses to the questions presented in Appendix 4 and Appendix 5 within the framework of the previously presented structure of the Chapter. This discussion addresses the four cornerstones of present and potential future Antarctic tourism regulation that were introduced in Chapter 2. Briefly, these are:

- What are the overall goals of tourism regulation?
- Who should be responsible for the design, implementation and policing of regulatory instruments?
- Where and to whom do specific regulatory mechanisms apply?
- What are the most desirable and feasible regulatory mechanisms?

These questions primarily focus on addressing the second goal of the thesis research and discuss the future implications of Antarctic tourism development from the viewpoint of assessing available regulatory options. Such an assessment and discussion has to be preceded and informed by an assessment of the current regulatory regime for

Antarctic tourism and an examination of the anticipated development of Antarctic tourism in the eyes of participants of the Delphi study.

6.1 The current regulatory regime

As new forms of tourism emerge, it becomes more difficult to imagine and design suitable mechanisms to manage tourism effectively. It also means it will be more difficult, if not impossible, to curtail the pace of development once governments and/or business interests realise the financial benefits to be gained from tourism enterprise. The moral dimension of tourism development grows ever more complex as the industry expands and diversifies in a given destination. (A study participant)

This section focuses on an assessment of the current regulatory regime for Antarctic tourism with specific reference firstly, to the strengths and concerns with respect to tourism regulation through the ATCPs and IAATO; secondly, to the overall stability and ‘teeth’ of the ATS; thirdly, to the success of the Protocol regarding the regulation of Antarctic tourism; fourthly, to the success of the site-specific guidelines adopted during the last three ATCMs in 2005 2006 and 2007; and finally to the issue of self-regulation and stakeholder behaviour viewed from the perspective of self-interest.

6.1.1 Main strengths of and concerns regarding tourism regulation through the ATS

The legal power of ATS regulation along with the availability of a great range of tourism-specific regulatory tools and the Protocol governing all human activities in Antarctica were mentioned as some of the advantages of the ATS. In the same manner, situating Antarctic tourism regulation within a well-established international regime backed by national legislation was regarded as one of the strengths of the ATS. Expertise, knowledge and cooperation were further considered strengths of tourism regulation through the ATCPs. It was claimed that, collectively, the ATCPs had a considerable knowledge of the Antarctic and operational matters, which, in the light of international cooperation under the ATS, could be of great value for designing and enforcing regulation. However, it has to be noted that a significant number of other participants voiced their concern about a lack of Antarctic tourism experience among ATCPs, a point which will be elaborated on later in this section.

Strategically, further strengths of tourism regulation through the ATS were thought to lie in its ability to be integrated into a wider strategy to determine uses and values of Antarctica. Finally, international recognition and acceptance for the ATS were viewed as additional assets of the system where the regulation of an international phenomenon such as tourism was concerned. The following table categorises the dominant responses of the study participants regarding the main strengths of tourism regulation through the ATS and indicates how many of the 26 first-round study participants mentioned a strength within one of the respective categories.

Table 6.1.1: Categorisation of the main strengths of tourism regulation through the ATS

Category	Compiled and summarised responses	#
Legal regulatory power	Regulations are mandatory for ATP nationals and are (more) authoritative.	12
Suitability as a regulatory regime	Tourism regulation through the ATS is a more legitimate, holistic, and stable approach backed up by domestic legislation and embedded in a well-established regime with a record of successful existing regulatory mechanisms.	11
Range of regulatory tools	Protocol governing all human activities and tourism-specific recommendations, resolutions and measures are available. Opportunities exist for site-management planning and the potential ability to cap growth.	11
Recognition and acceptance	The ATS is internationally accepted and recognised and ensures wide application of adopted regulatory mechanisms.	9
Strategic considerations	The ATS integrates tourism regulation within wider values and uses and provides for strategic and long-term decisions to be taken whilst improving the legitimacy and effectiveness of tourism regulation.	9
Protection of the environment and Antarctic values	The ATS ensures high levels of environmental protection, has the potential to address the issue of cumulative impacts and works towards the preservation of Antarctica for peaceful, scientific purposes.	7
Enforcement, monitoring, policing	Better enforcement options are offered through the ATS (than through other regulatory systems).	6
Procedural issues	The ATS benefits from consensus-based decision-making and the capacity to flexibly modify existing regulation, and it provides a forum for discussion of tourism issues.	5
Coverage	Tourism regulation through the ATS can provide maximum and consistent coverage of tourism operators.	4

Procedural problems topped the list of concerns with respect to tourism regulation through the ATS. Decision-making was viewed as a very slow and cumbersome process, which was further inhibited by the requirement for consensus. Inconsistencies regarding domestic legislation of the ATPs along with a lack of teeth and a lack of enforcement power were considered to be great challenges for enforcement, monitoring and policing. Moreover, in light of the current rate of development experienced by Antarctic tourism, the lack of priority with which the ATCPs treated Antarctic tourism and the regulation of larger cruise ships, were stated as sources of concern. A few participants noted that in terms of the practicalities and legal power of regulation, the burdensome and confusing complexity and the hortatory nature of a considerable number of regulatory mechanisms were worrisome. Similarly, the lack of regulatory mechanisms currently in place with a focus on Antarctic tourism was regarded as concerning. As mentioned in the previous paragraph, a lack of expertise and knowledge by ATCPs about the intricacies of tourism activities and issues was viewed as a weakness. Finally, the incomplete coverage of the ATS, specifically the 'Third-Party problem' was remarked on as an additional concern of tourism regulation by the ATCPs. Table 6.1.2 details and categorises concerns listed by study participants regarding tourism regulation through the ATCPs and specifies the number of responses received within each category.

Table 6.1.2: Categorisation of the main areas of concern with regard to ATS regulation of tourism

Category	Compiled and summarised responses	#
Procedural issues	Tourism regulation through the ATS is hindered by a very slow and cumbersome process of decision-making constrained and limited by a consensus-based system, which results in the 'lowest common denominator' determining the outcome of decision-making. Further, high costs and insufficient means to generate revenues to cover management costs are symptomatic for the ATS.	20
Enforcement, monitoring, policing	Inconsistencies in the domestic application of regulatory mechanisms, and especially the poor implementation of the Protocol by a range of ATPs, along with a general lack of enforcement power, burden tourism regulation through the ATS.	14
Suitability and acceptability	The ATS is criticised for suffering from a lack of vision and management planning disciplines, possibly being too heavy-handed, providing political instead of practical solutions and being unable to handle commercial and scientific values and practices simultaneously (particularly in view of the fundamental differences between governmental and non-governmental operations).	13
Antarctic tourism development	Tourism regulation through the ATS is said to lack, firstly, the ability to respond to changes in the market, and secondly, priority regarding various emerging issues (e.g. larger cruise ships entering the market, increasing scale of Antarctic tourism and growing numbers of operators involved in the business)	10
Practicalities and legal power	Tourism regulation through the ATS is characterised by the burdensome complexity of a confusing array of regulatory measures whilst loopholes in regulation still exist. Furthermore, not all regulatory mechanisms are legally binding.	8
Lack of regulatory mechanisms	Currently, many aspects of tourism are still unregulated, a strategic assessment of tourism is wanting and the generic application of EIAs is very limited.	8
Lack of expertise and knowledge	The ATPs are said to lack (real) knowledge of the intricacies of tourism activities and issues and risk of being out of touch if tour operators are not involved in decision-making processes.	8
Diversity of opinions and interests	There is a broad range of management philosophies, opinions, and (vested) interests evident among ATPs, which may hamper progress on adequate regulation.	6
Coverage	Third Party states are not bound by ATS provisions and ATPs are unable to extend adequate regulation to vessels flying the flags of Third Party states.	5

Overall, in the assessment of how successful the ATPs were in terms of governmental control and authorisation procedures for Antarctic tourism, the majority of the study participants ranked them as moderately successful or even unsuccessful. This judgement was primarily based on the inconsistencies and significant variations that existed between Treaty Parties regarding the implementation and enforcement of regulatory mechanism. Progress in terms of decision-making by ATPs was regarded as being sound but very slow by a study participant, and decisions were considered often to be made from a political rather than from a practical point of view.

6.1.2 Main strengths of and concerns regarding the self-regulatory system

Procedural qualities, such as flexibility and responsiveness to emerging issues along with quick decision-making, received the greatest attention as some of the main strengths of the self-regulatory system. It was interesting to note the contrast to the procedural problems perceived by a considerable number of the participants regarding tourism regulation under the ATS. Moreover, motivation, cooperation, peer pressure and a 'sense of unity' under IAATO were perceived as playing a significant role in maintaining good industry standards and were regarded as major

strengths of the system. Benefits for the environment, due to the fact that the responsibility for environmental care was put on tourism operators, as well as the complementary role the self-regulatory system played with respect to the ATS, were also referred to as main strengths of the system. Enforcement, monitoring and policing issues were further listed by the study participants as strengths of the system, with self-monitoring and policing being considered to be effective mechanisms. Other assets of the self-regulatory system that were named by the study participants included the participation, commitment and 'ownership' tourism operators exhibit within and towards the system, all of which resulted in greater accountability and bottom-up regulation. The high industry coverage and ability to include non-ATS states were also considered to be strong points worth noting. Finally, the participants of the Delphi study commended the vast amount of knowledge, experience and expertise in conducting tourism in the Antarctic that had been accumulated by Antarctic tourism operators over years of practice. Table 6.1.3 summarises the strengths of tourism self-regulation as expressed by the study participants along with the number of responses within each category.

Table 6.1.3: Categorisation of the main strengths of self-regulation

Category	Compiled and summarised responses	#
Procedural qualities	Industry self-regulation is characterised by active, quick, flexible, effective decision-making which has the capability of adequately responding to emerging issues. Application of agreed measure is immediate. Self-regulation further allows operators to be innovative and far-sighted.	16
Motivation and cooperation	A common sense of unity, peer pressure, motivation and cooperation among tour operators ensures a greater success of regulatory mechanisms.	12
Environmental benefits	A strong duty of care is put upon tour operators and greater environmental concern is fostered among tourists. Self-regulation also highlights and addresses the environmental responsibility and commitment to conservation of tour operators.	11
Suitability and relationship with ATCPs	The self-regulatory system complements the environmental principles heralded by the ATS, reduces the burden of tourism regulation on ATCPs, provides uniform and tough standards, and addresses issues that the ATCPs have yet to consider. The existing framework of self-regulation through IAATO is now well-established and accepted.	11
Enforcement, monitoring, policing	Self-policing and monitoring allows members to discipline offenders and is simple and easy to apply in the field as operators are on the spot to monitor environmental impact and regulatory compliance.	9
Participation and commitment	Bottom-up regulation and operator ownership leads to greater accountability, participation and support among operators as well as to active commitment to agreed rules and guidelines.	8
Expertise and knowledge	A vast amount of knowledge, experience and tourism expertise is held by Antarctic tour operators.	7
Coverage	Self-regulation is characterised by high industry coverage, the potential to cover operators from Third Party states and the ability to overcome international differences.	7
Practicalities of regulation	As those drafting the regulations are the ones implementing them, there is a tight coupling of regulatory mechanisms to operational considerations resulting in practical and feasible solutions.	6
Outcome-oriented qualities	Industry self-regulation encourages all industry members (including those who do not belong to the industry association) to meet high standards focuses on creating ambassadors for the Antarctic whilst satisfying recreational needs and tourist expectations. At the same time, IAATO members support national operations.	6
Communication, exchange of information, reporting	IAATO provides a central platform for communication, an active reporting system, and adequate channels for the exchange and sharing of information between tour operators and tour operators and governments.	6

The following two main sources of concern with respect to the self-regulatory system of Antarctica tour operators were seen by study participants:

- Firstly, the relationship of the self-regulatory system with ATCPs, specifically a growing tension with ATCPs and the potential for undermining the internal and external legitimacy of the ATS; and
- Secondly, the self-interest of the tour operators. Because of their self-interest, a regulatory system run by tour operators was regarded with some unease as tour operators might potentially use the system to their own advantage or might exhibit a distinctive self-serving attitude.

Furthermore, regarding rogue operators, enforcement, monitoring and policing were viewed with concern, because rogue operators might become a problem in the future while self-regulation might not be able to guarantee adequate monitoring of compliance. The voluntary nature of the system was seen as another cause for concern as comprehensive coverage and involvement of all Antarctic tour operators could not be assured. In the same manner, participation and commitment among tour operators were seen as highly variable. With the industry maturing and trying to involve a larger share of new operators, there might be the danger of losing sight of founding principles, motivations and expertise. Further concerns were voiced regarding Antarctic tourism developments such as the increasing scale of operations, which the self-regulatory system might not be able to handle. In terms of the practicalities and legal power of self-regulation, the lack of legally binding regulatory mechanisms and consequently the limited legal authority of the self-regulatory system were reason for additional concern. Table 6.1.4 details and categorises concerns regarding tourism self-regulation that were mentioned by the study participants, ranked by the number of responses received within each category.

Table 6.1.4: Categorisation of the main areas of concern with regard to self-regulation

Category	Compiled and summarised responses	#
Suitability and relationship with ATCPs	A growing tension between ATCPs and IAATO is noticed – there are some ATPs who are unsupportive of the regulatory efforts of IAATO and are generally opposed to self-regulation. There is a comprehensive set of IAATO member regulations and operational standards that are not ‘adopted’ by ATCPs. Further, a self-regulatory system can undermine regulatory efforts through the ATS as well as the internal and external legitimacy of the ATS. Moreover, it may be inappropriate to allow an industry to regulate itself.	14
Self-interest	Individual tour operators might use the self-regulatory system to their own advantage, protecting their own interests such that the system could become self-serving, which would erode the confidence in its outcome. Moreover, a potential conflict of interest might arise from the involvement of vested interests and uncritical opinions with respect to genuine problems.	11
Enforcement, monitoring, policing	Monitoring and inspection of the implementation of self-regulation are inadequate as there is no independent means of checking tour operator compliance as present. It is difficult to ensure that the high standards set are actually met by all members. The self-regulatory system is unable to deal with rogue operators.	9
Coverage	Self-regulation is of a voluntary character, which results in imperfect coverage, the inability to incorporate all types of tour operators and the opportunity for businesses to operate outside of the system without penalty.	9
Participation and commitment	Inevitably, some operators are more experienced and conscientious than others whilst the system relies on collective responsibility of a diverse group of tour operators. The system relies too heavily on the goodwill of operators, particularly as the foundational experience and motivation may be lost as the industry matures.	8

Category	Compiled and summarised responses	#
Environmental concerns	Tourism poses potential threats to the Antarctic environment (e.g. localised species and habitat disturbance), which the self-regulatory system may not be able to counter. The risk of emergencies and accidents along with the associated problems are bound to persist.	8
Practicalities and legal power	Self-regulation is not legally binding and entails only limited legal imperatives. It does not have the 'teeth' to address the activities of non-members.	8
Antarctic tourism development	The self-regulatory system may not be able to adequately address the growth of the industry and may be impotent with respect to halting a further increase in numbers or the size of vessels	8
Commercial control	Antarctic tourism self-regulation might set a precedent for the regulation of other commercial activities in Antarctica and is dominated by commercial ambitions and priorities. Thus, it is susceptible to the influences of commercial interests, both at the design and implementation stages of regulatory mechanisms.	7
Communication, exchange of information and reporting	There is the potential for the negative effects of tourism to be obscured as reports might be filtered to ensure that the industry is presented in the best possible light. There are no arbiters and communication problems might occur.	6

Overall, regarding self-regulation and monitoring of compliance, IAATO was primarily judged as being either highly successful, successful or moderately successful⁶⁰. However, in this respect, some study participants argued that IAATO's performance was greatly influenced by its member body, and whereas it effectively operated on the whole, some lapses⁶¹ occurred. In terms of Antarctic tourism practice, individual tour operators were considered to range from excellent to fair or even poor. Some operators were claimed to be "excellent, most within IAATO [were] at least reasonable, [but] some ... [were] appalling."

6.1.3 The stability and 'teeth' of the Antarctic Treaty System

Half of the study participants viewed the ATS as reasonably stable, or as one participant commented, "about as stable as c[ould] be hoped for". The ATS seemed to increasingly attract interest from second-world countries wanting to participate resulting in growing levels of activity within and around the ATS and greater involvement of non-state actors. About one-fifth of the participants regarded the ATS as a very stable, successful model, which had matured over time and become more inclusive. One study participant considered the ATS as very unstable as "activities increase[d] within and on the edge of the ATS" and "more states and non-state actors [we]re involved" whilst a "declining willingness and capacity of the ATS to regulate" could be observed. However, the remaining study participants did not pass any judgement for the reason that they either felt they could not adequately comment or because the ATS had not been tested to a great extent thus far.

The majority of the study participants agreed with the statement that the ATS did not have teeth with regard to regulating human activities in Antarctica, although there were a few comments hinting that caution should be applied as,

⁶⁰ One study participant argued that self-regulation through IAATO was unsuccessful as "a great deal is taken on trust" only and that research showed that tourism regulation was frequently breached by members.

⁶¹ Here, the participants were referring to minor issues such as passengers getting too close to wildlife or trying to stay on shore longer than their allotted time.

so far, the ATS had not been challenged to any great extent. The ATS largely relied on the cooperation and goodwill of stakeholders. In this system of voluntary compliance the moral pressure to comply with regulations might be underestimated. Moreover, participants maintained that there was no true alternative to the ATS. A third of the participants argued that whereas the statement that the ATS did not have teeth represented a commonly assumed suggestion, it did not contain substantial truth. These participants contended that the ATCPs had the option of taking binding decisions, which had to be implemented in domestic law (Protocol provisions being a case in point). What was needed was a good incentive for the ATCPs to apply the full force of AT and Protocol provisions, which as one participant cynically stated, could be achieved after experiencing a disaster. Indeed, the sinking of the *M/S Explorer* in Bransfield Strait in November 2007 can be expected to result in passionate discussions at the upcoming XXXI ATCM in Kyiv, Ukraine, and potentially in additional regulatory mechanisms dealing with shipping safety to be adopted.

6.1.4 The Protocol and the regulation of Antarctic tourism

Generally, the Delphi study participants agreed that the environmental principles of the Protocol formed the backbone of the regulation of human activities, and hence of tourism, in Antarctica. In the first round of the Delphi study, twelve participants considered the statement that “the Protocol formed the backbone of the regulation of human activities in Antarctica and that therefore, Protocol provisions had to be strengthened and implementation had to be more coherent”, as valid and most relevant. Another seven study participants regarded the aforementioned statement as relevant and the statement’s validity as certain, leaving three participants attributing only insignificant relevance or irrelevance to the statement and one participant viewing the validity of the statement as risky⁶².

The second round of the Delphi study again posed the question about the validity of the aforementioned statement (see Appendix 5). Whereas half of the participants accentuated that it was necessary to strengthen the provisions of the Protocol, particularly in view of tourism operations (e.g. through simplification and clarification of the provisions), the remaining study participants urged to apply caution with regard to analysing the necessity of strengthening the provisions of the Protocol. Firstly, careful assessment was required as to whether the provisions were in fact insufficient or unsatisfactory, and if so, where the problem lay? According to some study participants, there was no indication that the provisions of the protocol needed improvement as there was no evidence that they were insufficient. Besides, any calls to change the text of the Protocol itself were likely to encounter a lot of resistance. It would be much easier to change the Protocol Annexes, which were designed such that they could easily be updated. This was not to say that one should discard the idea of changing parts of the Protocol *per se* – in fact, openness regarding the reflection upon and revision of the Protocol was said to be required at all times.

The crux of the matter appeared to lie in varying degrees of implementation of the Protocol, as most participants pointed out. Political will and guidance were needed in order to strengthen a coherent and largely uniform implementation of Protocol provisions. Nonetheless, one had to bear in mind that it was an unfortunate feature of all international treaties that they were interpreted and applied in different ways as one study participant argued:

⁶² The remaining participants resorted to the “no judgement” option.

With regard to coherence of implementation, it is an unavoidable reality of international agreements that different countries may interpret and apply agreements in different ways. It is important to realise that the Protocol and the Treaty guide what countries should do – the power remains with each signatory to apply the agreements in a legal sense.

Hence, it was important to remember that the aim of the Protocol was to specify the principles for environmental protection in Antarctica and to provide guidance for countries in this respect. Uniform application of the Protocol was likely to remain an illusion as much as complete, centralised control over how individual countries implement Protocol provisions was likely to be unfeasible.

When asked how successful they consider the Protocol to be with regard to regulating Antarctic tourism, eleven study participants responded that in this respect, the Protocol was successful, whilst another seven participants viewed the Protocol as mildly successful. It was noteworthy that whilst no participant considered the Protocol to be very successful, two study participants stated that the Protocol was unsuccessful in regulating Antarctic tourism as it neither regulated nor exercised control over the industry but left regulatory power to the individual ATCPs who could only regulate their own citizens. Further, only EIA provisions were operationally developed for Antarctic tourism (albeit not even well-designed for tourism), which was seen to be insufficient for the regulation of Antarctic tourism.

Those who considered the Protocol successful in terms of regulating Antarctic tourism underlined their judgement by exemplifying the applicability of the Protocol to all human activities in Antarctica, its success in setting standards for species and area protection, by providing a framework for comprehensive monitoring and site management as well as terms of reference for how operations in Antarctic should be conducted. However, at the same time, the Protocol was considered to have weaknesses, primarily with regard to inconsistencies in its implementation (as mentioned in the previous paragraph) loopholes as not all activities were encompassed adequately and as agreed standards were not properly defined, and inadequacies with respect to its focus on NAPs rather than on tourism-related activities.

6.1.5 Success of the site-specific guidelines

Generally, the study participants considered the site-specific guidelines (e.g. for Hannah Point, Cuverville Island or Yankee Harbour) that had been adopted by ATCPs during the last three ATCMs in 2005, 2006 and 2007 to be successful, with opinions in this respect ranging from 'very successful' to 'mildly successful'. The site-specific guidelines were deemed to

- set out clear management prescriptions,
- provide a benchmark taken seriously by operators,
- underpin industry cooperation with ATCPs,
- allow the speedy adoption and easy modification of site management plans, and
- raise awareness among tour operators of the fragility of particular landing sites.

However, the site-specific guidelines should not be considered a panacea as their implementation did not automatically guarantee operator compliance with the guidelines. Moreover, the site guidelines were seen as less effective in restricting or regulating certain activities, and their success largely depended on the specific sites.

Some current problems with the guidelines that were pointed out by participants included

- the difficulty of discerning vegetation early in the season as e.g. moss might be covered over with snow,
- issues with ships overstaying,
- the manageability of larger tourist groups on shore, and
- observed breaches of the guidelines by station personnel.

Overall, the site guidelines should be extended to all sites, not just a few, and needed to be accompanied by a set of goals specifically defined for the sites so that the effectiveness of the guidelines could be measured. Finally, adequate monitoring of the efficacy of the guidelines was necessary in order to determine whether modifications to the existing guidelines were required.

6.1.6 IAATO and self-interest as a force for conservation?

Participants were confronted with the following statement in the first round:

IAATO has been criticised by ATPs as being driven by self-interest. The tour operators argue that it is exactly this self-interest that should be regarded as beneficial to the Antarctic environment. They sell Antarctica as a pristine wilderness destination and will do their utmost to maintain it in a pristine condition.

Half of the study participants viewed the above statement as most relevant (and another fifth as relevant) in defining the motivation of tour operators to maintain the integrity of the Antarctic environment. The majority of the participants considered the statement as being valid in and of itself as self-interest was as much a benefit as a concern for self-regulation – if tour operators caused environmental detriment, they would effectively lose ‘their’ resource. As the Antarctic environment was the basis of the tour operators’ business, a participant argued that tour operators had a commercial and emotive reason to protect it. However, whereas some participants saw self-interest as a motivation for conservation, others called for more formal regulation, particularly in view of the current development of Antarctic tourism. Nonetheless, three participants cautioned that it was not only tour operators that were driven by self-interest; ATPs would be, too, as governments aimed at getting re-elected or strived for greater influence in world politics.

There are clearly two sides to the coin – not only with respect to whose self-interest would stand on a ‘higher moral ground’, but also in view of the future development of the industry. As one study participant observed, it was still unclear whether ‘enlightened self-interest’ would be as reliable in the future as it had been so far in controlling human behaviour as the industry grows. On the other hand, a number of participants stated that a direct linkage between self-interest and conservation might be problematic for various reasons. Firstly, the interest of any business was primarily focused on making money. Secondly, Antarctica tour operators were not homogeneous, but had different

motivations and interests. Thirdly, the possibility of rogue operators might considerably weaken the notion of self-interest benefiting environmental conservation.

However, a number of study participants⁶³ chose not to pass any judgement as they saw some problems inherent in the above statement. Primarily, these problems related to the following assertions:

- There was no empiric evidence that businesses were willing to cut down their profits for the sake of environmental conservation. The bottom line of any business was to make money implying that limits would be pushed if need be.
- Tour operators had different motivations; and it would be naïve to expect all of them to operate in a manner beneficial to the environment.
- It was unrealistic to think that Antarctic tourism ‘benefited’ the environment.
- There was not enough data on how Antarctic tourism might be affecting the environment (particularly with respect to the cumulative impact of tourism). More research was needed in this respect.

In the second round of the Delphi study, when the aforementioned statement was reiterated in order to substantiate the responses collected in the first round, all study participants agreed that tour operators had a vested interest in preserving the qualities of Antarctica. The Antarctic environment was seen as the tour operators’ product, which had to be conserved in order to maintain the profitability of their operations. As the participants pointed out, operators had an incentive to protect the Antarctic destination, particularly as many operators showed long-term commitment. However, participants also stressed that whereas IAATO was doing a very competent job at the moment, many challenges lay ahead, particularly regarding the changing structure of the industry, bigger vessels visiting Antarctica, less concerned and larger operators including Antarctica as a destination in their travel itineraries, changing expectations of passengers, and cumulative impacts of tourism, which could not yet be fully assessed. A participant mentioned that self-interest might not prevent the demise or tragedy of the commons as eventually an open-access resource such as Antarctica could be used by certain actors for their own benefits – ultimately degrading the resource for the collective. It was further pointed out that not all tour operators had “identical motivations, levels of Antarctic experience, knowledge, capabilities, expertise, field practices and modes of operation as well as highly trained staff” and that the dedication of tour operators to protect the Antarctic environment might not be enough in the long term. As such, the results obtained in the second round of the Delphi confirmed and strengthened the impression gained in the first round, namely that the issue was more complex than appeared at first glance. The self-interest (or vested interest) of tour operators at the moment tilted the scale towards a commitment to environmental protection, but at the same time the industry matured, and changes in the behaviour and motivation of tour operators might occur.

⁶³ Seven participants resort to “no judgement” with respect to an assessment of the relevance of the aforementioned statement and eight study participants with respect to commenting on the validity of the statement.

6.2 Current developments and trends in Antarctic tourism

Antarctica should inspire, enthrall, enrapture and educate. And the more people that go there with an open mind, the more we create an international constituency of people who are passionate not just about protecting Antarctica, but also other wild places closer to them. (A study participant)

This section presents stakeholder perceptions and anticipations regarding the future development of Antarctic tourism in order to provide a baseline against which to assess various potential regulatory mechanisms. Moreover, the participants' hopes and concerns with respect to the future development of Antarctic tourism are presented in this section. This will allow for a comparison between the views of the Delphi study participants and those of the interviewees (that were presented in Chapter 5) as regards an environmental conservation imperative. The issue of land-based operations and large cruise vessels as well as the implication of a diversification of tourism activities for Antarctic tourism regulation will also be touched on in this section. Particularly the latter directly links into the following section on regulatory options that might have to be considered in order to provide for successful and effective tourism regulation in the future.

6.2.1 Major concerns and hopes with respect to Antarctic tourism development

When asked how they envisioned Antarctica in 25 years from now, almost half the study participants stated that the continent should not look substantially different from the way it looked now. Most study participants explicitly expressed the hope, too, that no permanent tourism structures were to be erected and that (commercial) exploitation of minerals and fossil fuels was not to occur. Furthermore the wish was articulated that Antarctica be protected and preserved as a wilderness. Moreover, a general desire for the continuance and stability of both institutions, the ATS and IAATO, well into the future was expressed. Over the next 25 years, the development of the continent should be limited, high-grade international collaborative research and the continent's designation to science and peace should be maintained, and comprehensive impact monitoring programmes should be put in place.

Current trends in Antarctic tourism, specifically increasing numbers of tourists, seemingly unrestricted growth, and increasing numbers of large, not ice-strengthened cruise vessels, were mentioned by most of the study participants as the major concerns with respect to Antarctic tourism development over the next 25 years. Environmental concerns, such as environmental catastrophes and pollution by fuel spills, increasing pressures on the environment and environmental disturbance, as well as increasing pressure to build permanent tourism infrastructure, took a close second place on the 'concerns list'. Moreover, regulatory concerns, particularly the absence of mechanisms to control tourism numbers, and safety considerations with major accidents seen as a question of 'when' rather than 'if', were also frequently viewed with concern. Overall, study participants were relatively outspoken when listing their concerns with respect to the development and regulation of Antarctic tourism in the future as the number of items listed by study participants and summarised in Table 6.2.1 shows.

Table 6.2.1: Categorised overview of major concerns with respect to Antarctic tourism development

Category	Compiled and summarised responses	#
Tourism trends	Increasing numbers of tourists visiting Antarctica and likewise increasing numbers of large, not ice-strengthened cruise liners ⁶⁴ are feared. Further concerns are the diversification of tourist activities, an increasing number of yachts, rogue operators, the increasing political influence of large-scale businesses and Antarctic tourism developing into mass tourism and becoming the dominant activity in Antarctica permeating all aspects of human endeavour.	26
Environmental concerns	There is concern regarding the increasing pressure on and disturbance of Antarctic ecosystems along with the risk of environmental catastrophes or pollution by fuel spills occurring. The pressure for permanent tourism infrastructure to be erected has environmental and political implications. Of further concerns are the introduction of alien species, Antarctic tourism-related CO ₂ emissions and heavy fuels used by older ships.	21
Antarctic values	A general diminution of Antarctic intrinsic, wilderness and educational values along with the potentially decreasing status of science as a primary activity are feared. Antarctica might develop into just 'another destination' and the management of the visitor experience might become problematic. Commercial activities might further place stress on the core values of the AT, such as information exchange.	15
Regulatory concerns	There is concern about the lack of mechanisms to control tourism growth and the inability to quickly develop responses to emerging problems. The regulation of large cruise vessels, the trend of treating tourism activities differently from other human activities, loopholes in tourism regulation, and the lack of comprehensive quarantine mechanisms at gateway ports are problematic. It would be disastrous if self-regulation failed, necessitating the introduction of draconian measures.	13
Safety considerations	Major accidents are bound to happen and threats to life and passenger safety are concerning. The harshness of the environment and Antarctica's remoteness may hinder rescue operations.	12

6.2.1.1 Territorial sovereignty issues and opposing stances

Two-thirds of the study participants considered the often-cited concerns with respect to territorial sovereignty issues (Enzenbacher 2007; Scott 2001; Beck 1990) irrelevant and unimportant to the regulation of Antarctic tourism, as long as the AT remained in force. The remaining study participants saw some risk in countries using tourism as a tool to assert their sovereignty or gain leverage over other ATCPs. This could lead to a division of interest, which might dangerously weaken the ATS. Therefore, the participants argued, efforts needed to be made to maintain a strong ATS and to move away from a nation-state focus towards a more global approach.

In view of the aforementioned concerns, some study participants offered a few ideas or potential solutions for the regulatory dilemma that would arise from the concerning scenarios collected in Table 6.2.1. Primarily, these ideas focused on the necessary control of ships, regulations to limit the size of vessels visiting Antarctica, regulations dealing with the types of fuel used, the introduction of the regular auditing of vessels by external bodies, the implementation of major incident plans at an international level, and an improvement of enforcement and policing of Antarctic waters.

⁶⁴ It is noteworthy that despite anticipated movements towards larger vessel sizes, the Norwegian operator Hurtigruten has had the M/S *Fram* purpose-built for explorer cruises to the polar regions in 2006. The M/S *Fram* is an ice-strengthened vessel with ice class 1B and only has a total passenger capacity of 320 (see also Appendix 9).

The concerns listed in the previous table, and the ideas offered either to prevent them from turning into reality or to limit their negative implications, were also reflected in the hopes articulated by study participants with respect to the future development of Antarctic tourism. Overall, responsible and proactive regulation, for instance limiting the growth in the industry through putting a cap on tourism numbers, as part of a conscientious management regime was hoped for. Furthermore, it was hoped that tourism trends would be characterised by stabilised growth patterns and largely ship-based, small-scale tourism operations. In terms of tourism ethos and practice, high levels of cooperation between ATCPs and industry were considered advantageous. Table 6.2.2 details and categorises the hopes expressed by study participants regarding Antarctic tourism development.

Table 6.2.2: Categorised overview of main hopes with respect to Antarctic tourism development

Category	Compiled and summarised responses	#
Regulatory issues	Tourism is limited in type and scale, IAATO continues to regulate responsibly and a comprehensive tourism management regime is in place. Proactive allocating mechanisms for site visits, tightened bio-security measures, restrictions on the size of vessels and independent operator accreditation and audit schemes are established. IAATO has the internal strength and cohesion to keep up the self-regulatory system and accepts or introduces tighter controls resulting in a maintained sensible and pragmatic synergy between ATCPs and IAATO. All Antarctic tour operators are engaged in the development of environmental principles.	17
Tourism trends	Tourism continues to be mainly ship-based and remains relatively small-scale with education and knowledge representing the main elements on Antarctic itineraries. Tourism develops in a stable fashion with costs – monetary and in terms of discomfort – and the continued involvement of pioneer operators preventing Antarctic tourism from developing into mass tourism. Only low-impact land-based activities occur.	14
Tourism ethos and practice	Stakeholders succeed in maintaining high levels of cooperation between tour operators and ATCPs and practice a proactive approach to managing tourism. Antarctic tourism sets the standards for responsible, environmentally sustainable nature-based, ethical tourism elsewhere in the world.	12
Antarctic values	Antarctica remains a place for science, peace, education and understanding and is seen as a 'destination of choice' for those with a deep interest in the nature and history of the place. Tourism recovers its focus on what Antarctica has to offer instead of expanding into all sorts of activities that can be conducted anywhere on the planet. Tourism creates greater awareness and a wider public interest in and support for Antarctica and the ATS.	7
Environmental issues	Humankind will succeed to maintain the enshrined principle of 'less than minor or transitory impact on the environment' and to prevent the erection of permanent infrastructure for tourism.	4

6.2.2 The issues of land-based operations and large cruise vessels

Only a few of the study participants stated outright that there should be no land-based tourism in Antarctica. The vast majority of the participants commented that land-based tourism operations should be permissible. There were no legal and jurisdictional grounds to prohibit modest land-based operations, provided that their environmental impact is acceptable and well-monitored, that land-based operations are well-regulated and conducted in a safe and small-scale manner. There seemed to be a general antipathy against the development of permanent infrastructure and a great increase in scale of land-based tourism. One study participant noted that the debate surrounding land-

based tourism appeared to focus on moral and ethical principles (whether land-based tourism should be allowed) rather than on the rational discussion of actual and potential environmental impact.

Large cruise vessels were classified as important risk factors by the majority of the study participants as rescue operations in case of an incident would be extremely difficult, and casualties would be likely. With their operational peculiarities (the lack of ice-strengthening of many of these vessels and the poor state of charting of Antarctic waters) and concerns about health and safety as well as environmental impacts in the case of accidents, the operation of larger ships in Antarctic waters posed interesting environmental, safety and philosophical questions. According to the study participants, companies operating large vessels could change the way Antarctic tourism operates in the future because they might fail to see benefits of IAATO membership and generally had greater budgets and more influence in their home countries. Therefore, these companies needed to be involved, although their input should be limited. The majority of the study participants concluded that large vessel operations should be carefully considered and thoroughly regulated through ATCPs. There were suggestions that ATCPs should limit the size of vessels operating in Antarctica or that large vessel operations and specific activities should be controlled generally, e.g. through maritime zoning. On the other hand, one participant stated that large tourist vessels should not operate in Antarctica.

However, aside from the potential disaster of a serious marine accident, two participants highlighted that, so far, there had not been any problems with large vessels. For most of the large vessels it would be too time-consuming to conduct landings, and they embraced cruise-only itineraries anyway. If large vessels complied with the site-specific guidelines and the principle of having no more than 100 passengers onshore at any one time, they should be allowed to conduct landings according to the aforementioned two study participants.

6.2.3 Implications of the diversification of Antarctic tourism activities for tourism regulation

The majority of the study participants considered a move from largely ship-based to fly-cruise tourism to be

- (a) generally undesirable because of its impacts, its carbon footprint and its potential to open Antarctica as a destination to more tourists (for instance, the ones that shun the arduous trip across the Drake Passage or that cannot afford traditional ship-based cruises),
- (b) feasible in terms of the available technology, but potentially requiring permanent structures such as aircraft and passenger holding facilities to be erected in Antarctica, and
- (c) a challenge for ATCPs as tourism regulation needed to be flexible enough to respond to this kind of diversification of tourism activities.

So far, there was only a very limited amount of fly-cruise tourism occurring and, according to two participants, provided no new infrastructure was added, it was unlikely to increase in scale. Nonetheless, regulation had to be strengthened to deal with this issue if it arose as changes in the nature of Antarctic tourism could happen quickly.

Aside from one participant who stated that the diversification of Antarctic tourism activities had little impact for the regulation thereof, the study participants agreed that the diversification of tourism activities posed an important chal-

challenge for regulators. It would make it more difficult for ATCPs to keep pace with new trends and to develop new mechanisms that regulated the new activities effectively. As tourism activities diversified, new types of environmental and safety risks were created, and the moral and ethical dimension of Antarctic tourism seemed to increase in complexity. Tourism regulation needed to account for the aforementioned issues and needed to evolve with the new developments. According to a study participant, IAATO had to keep pace with and anticipate new trends as some member companies might try to push the limits over time. A participant also mentioned that a diversification of activities was likely to have an adverse effect on the overall scale of Antarctic tourism. With new activities being offered, more people were likely to be attracted. In the same vein, changes in the tourism industry and a diversification of tourism activities had to be counterbalanced by an evolving system of regulatory mechanisms, which, according to one study participant, should be based on a standards and principles for guiding and regulating new activities.

6.3 Future options for the regulation of Antarctic tourism

I am a romantic, so I believe that Antarctica is for all of us, and that the original pillars of the 1959 Treaty, 'science' and 'peace', should remain. We must hope that in this one case of Antarctica, traditional political, strategic and economic state rivalries will be put aside. We need, in a place like Antarctica, to think globally and get away from the nation-state mindset which has so dominated international relations since 1800. (A study participant)

This section links into the previous section by considering future regulatory options for Antarctic tourism, which would adequately address new developments and a maturing industry. In order to assess various possibilities for the regulation of Antarctic tourism in the future, the feasibility and desirability of regulatory mechanisms have to be examined. Moreover, regulatory tools have to be designed to deal with what is perceived as a 'problem', or potential 'problem', and have to pursue a certain goal. The previous section on the anticipated development of Antarctic tourism details the mosaics which form that goal from the viewpoint of the stakeholders. It is important to note that study participants expressed hopes and concerns with regard to Antarctic tourism development that reflected a strong conservation imperative. The desire for stability, the maintenance of the principles of peace, science and environmental protection enshrined in the ATS, and the prevention of permanent tourism infrastructure being erected in Antarctica are useful indicators for what the goals for future Antarctic tourism regulation – if not the regulation of all human activities on the Antarctic continent – should be. Regulatory mechanisms have to be tailored to effectively address issues that impact on the achievability of these goals. The success of regulatory mechanisms in this respect also depends on their feasibility and acceptance by the stakeholders who have to enact and comply with them. Therefore, stakeholders' opinions with regard to a desired and workable regulatory framework are of significance. This section presents a selection of such perspectives offered by the Delphi study participants and focuses on the following issues:

- General principles regarding the regulation of Antarctic tourism
 - Focus of Antarctic tourism regulation
 - Ship-based vs. land-based activities
 - Responsibility for Antarctic tourism regulation and the roles of various stakeholders
 - The nature of regulatory mechanisms

- The cornerstones of a desired regulatory framework for Antarctic tourism
 - Components of an integrated regulatory system
 - Overarching regulatory instruments
- An exploration of various regulatory tools
 - An accreditation scheme for tour operators
 - Port-state vs. flag-state jurisdiction
 - Zoning

6.3.1 General principles regarding the regulation of Antarctic tourism

The vast majority of the participants were of the opinion that Antarctic tourism should be regulated, referring primarily to the absurdity of not regulating Antarctic tourism whilst most industries in other parts of the world were regulated, or using environmental considerations and the minimisation of environmental impact for their reasoning. A cooperative approach between the ATS and the tourism industry was favoured, although it was repeatedly mentioned that the ATCPs should maintain the ultimate responsibility for regulating Antarctic tourism. A number of participants preferred a sole regulation through the ATS, and a few wanted to involve additional stakeholders beyond ATCPs and IAATO.

6.3.1.1 Focus of Antarctic tourism regulation

In agreement with frequently mentioned concerns about current trends in Antarctic tourism and growing numbers of tourists, the desire was for the regulation of Antarctic tourism to focus on tourism practice or to counter current trends, for instance by regulating the numbers of tourists ashore, and limiting activities or seasonal duration. Thus, many study participants stressed that, in the near future, regulation should concentrate on environmental and operational issues in such a way that tourism growth and diversification as well as the size of vessels, their itineraries and landings could be controlled. Table 6.3.1 shows how the study participants ranked six Antarctic tourism issues regarding the urgency of addressing the respective matters, with rank one indicating that regulatory intervention is of greatest importance, and rank six indicating that it is of least importance.

Table 6.3.1: Antarctic tourism issues with respect to the importance of regulatory intervention

Issues	Mean	Median	Frequencies					
Rank			1	2	3	4	5	6
Permanent land-based facilities for	2.71	3	5	1	3	3	2	0
Incidents and accidents	2.86	2	5	4	0	1	1	3
Increasing scale of the Antarctic tour-	3.50	4	2	0	4	5	3	0
Cumulative impacts (solely tourism-	3.50	3	2	2	4	1	3	2
Availability of air links for tourist pur-	3.57	3.5	2	4	1	2	1	4
Increasing numbers of tourists visiting	4.21	4	0	2	3	3	2	4

Scale: from '1' (greatest importance) to '6' (least importance)

Table 6.3.1 reflects the concerns and hopes with respect to Antarctic tourism development articulated by the study participants and detailed in the previous section. In line with the goal of maintaining the integrity and wilderness

character of the Antarctic environment and limiting development of the continent, the issue of permanent land-based facilities for tourists was considered to require the most immediate attention, closely followed by potential risks to the environment and human safety by incidents or accidents. According to many of the study participants, Antarctic tourism regulation should overall focus on aspects of environmental protection such as the minimisation of environmental impact and the regulation of tourist, crew and staff behaviour.

6.3.1.2 Ship-borne and land-based tourism operations

Recognising the differences in terms of activities, current scale, impacts, operational characteristics and destination, the majority of the study participants felt that ship-based and land-based tourism should not be treated similarly. However, there was general agreement that ship-based and land-based tourism should both be regulated in such a way that wilderness values of Antarctica were preserved. Participants who believed that ship-based and land-based tourism should be treated in a similar fashion, contributed this conclusion to the general need for both operations to be regulated in order to minimise the impact of tourism operations in a consistent manner. Therefore, what really seemed to count was the impact tourism had on the Antarctic environment and other systems. Two participants also mentioned that they considered ship-based operations to be of a more transient nature and easier to be restricted and regulated, whereas tighter control for land-based operations might be needed. This conclusion stood in contrast with the arguments of two different participants who claimed that land-based tourism inherited less risk for environmental disasters and less impact on wildlife as operations were smaller in scale and further away from coastal breeding sites. One participant explicitly stated that land-based operations involving the erection of permanent facilities should not be allowed, an issue which was not commented on by the other participants. However, the participants seem to agree that operation-specific regulation is called for, which was eloquently summarised by one participant:

Yes [ship-based and land-based tourism should be treated in the same way], in the sense that all activities should be planned and assessed in light of their likely impact on the environmental, wilderness, aesthetic, scientific and other values of Antarctica. No, in the sense that it may be necessary to develop special guidelines or regulations to cover the safety or other aspects of shipping operations or that apply only to certain forms of land-based operations.

6.3.1.3 Responsibility for Antarctic tourism regulation and the roles of various stakeholders

The ATCPs were mentioned by almost all of the participants as ideally being the ones responsible for voting. In the other categories, the ATCPs fared remarkably well, too, followed by IAATO and the National Governments. The overall results indicate that the responsibility for all aspects of Antarctic tourism regulation should at least partially remain with the ATCPs. Only in questions of implementation were the ATCPs and IAATO ranked similarly. This could be regarded as the suggestion that the legal requirements for Antarctic tourism regulation should be set by the ATCPs supported by industry self-regulation.

Table 6.3.2 provides a detailed overview of the distribution of responsibilities for various aspects of Antarctic tourism regulation as seen by the study participants. Here, it is to be noted that the numbers provided in Table 6.3.2 indicate the numbers of responses for each category and stakeholder. The responses within each category do not add up to

the number of study participants, because the 26 study participants were each given the option to name as many stakeholder groups as they felt adequate for each aspect of Antarctic tourism regulation.

Table 6.3.2: Responsibility for various aspects of Antarctic tourism regulation

	ATCPs	UN system	IAATO	Tour Operators	Ntl. Govts.	Env. orgs.	Others
Design	18	3	17	10	6	11	2 ¹
Voting	19	1	7	4	5	3	1 ²
Implementation	13	1	13	10	12	2	1 ³
Enforcement	12	2	10	6	11	1	0
Monitoring	15	1	8	8	11	5	3 ⁴
Policing	17	1	3	3	11	1	1 ⁵

Others: ¹ all Antarctic stakeholders should participate in the negotiations, but not all should have a vote;

² and ³ SCAR;

⁴ informed neutrals/academics, everyone and the CEP that has such a task already, SCAR;

⁵ CEP (has such a task already)

A study participant summarised the situation as this:

the international consensual regulation (through the ATS) should be combined with national regulation in terms of the implementation of international regulation, the dissemination of guidelines, and the maintenance of good relationships with operators, industry self-regulation through 'enlightened' self-interest of operators and personal responsibility of well-informed tourists.

The study participants stressed the need for mutual trust and cooperation between ATCPs and IAATO. Two participants maintained that ATCPs should remain in control (and tour operators would continue to be bound by ATS regulation), but should work with IAATO as IAATO had the operational expertise and knowledge that many ATCPs lacked. For this reason, both parties needed to respect each other and each other's position, but also needed to specify where each party's responsibility lay in order to improve regulatory issues. A study participant added that it was necessary to achieve a balance of power between IAATO and ATCPs and make them equal players in order to succeed. "Petty power struggles", as a study participant advised, between IAATO and ATCPs should be put aside as issues such as climate change might soon be far more urgent and challenging, making a debate over tourism sound redundant and irrelevant. One study participant expressed concerns with the direction the relationship between IAATO and ATCPs took as it appeared to be moving away from a beneficial synergy. This study participant urged for greater appreciation of IAATO's success in light of alternative developments if IAATO did not exist. Another participant considered the relationship between IAATO and ATCPs to be increasingly defined by the increase in government-supported and joint venture tourism between commercial tour operators and NAPs.

6.3.1.4 The role of Third Party states and non-members of IAATO

Opinions regarding the role of Third Party states with respect to Antarctic tourism regulation ranged from 'no role' or 'minimal role' to the view that Third Party states needed to be involved as they could provide opinions or voices from the outside which might offer a different perspective and ensure that the ATS addresses all of humankind. Furthermore, because of their lack of direct involvement, Third Party states might provide interesting lateral ideas which

could advance the ATS and tourism regulation. Three participants also pointed out that Third Party states should be regarded as a risk factor. Although so far there had not been any significant practical problems in relation with Third Party states, they did pose a tourism management problem, particularly with respect to vessels flying the flags of Third Party states as here the parties had to solely rely on the tour operators to comply with ATS regulations whilst often not all issues of the vessel operation lay in the hands of the tour operator. A participant suggested that although Third Party states could not officially be bound by ATS provision, the goal should be to encourage them (and potential tour operators from these countries) to voluntarily adopt ATS standards.

The majority of the study participants shared the opinion that non-members of IAATO represented a risk factor in that they were thought to operate without adequate management strategies and outside adequate audit systems. Non-members were regarded as problematic for the industry as IAATO aimed at 100% industry coverage to ensure that high standards were met, that complete records of tourist operations could be kept, and that the itineraries of the various tour operators would not conflict. Moreover, non-members were considered to be a problem for national agencies responsible for the permitting process for Antarctic visits as these agencies relied on IAATO membership as symbolic of a high standard of operations. The national agencies, however, had to review the applications of and apply the same regulatory procedures to all tour operators, no matter whether they were IAATO members or not. For these reasons, the majority of the study participants argued that tour operators needed to be encouraged to join IAATO or at least to closely keep to IAATO guidelines. Non-members of IAATO should not have great input in policy-making, but should in any case be regulated through the ATS, which might become difficult for vessels registered in Third Party states and/or operators with their business located in Third Party states. Two study participants stated that it was entirely legitimate for tour operators to decide not to become IAATO members, and that therefore, ATCPs needed to ensure that the regulation of Antarctic tourism relied on specific ATS standards and procedures, much more than on the membership to an industry association.

6.3.1.5 The nature of regulatory mechanisms

The majority of the study participants favoured a combination of binding and voluntary rules and regulations because there was the scope, if not the necessity to have both. As one participant commented, there were cases where “voluntary c[ould] be too loose and binding too strict”. This underlines the suggestion in one of the replies that binding regulations should be applied where necessary and voluntary regulations should be used where possible. Almost one-fourth of the study participants favoured binding rules as otherwise regulation would potentially be ineffective.

The opinions were divided on the topic of how formal or informal Antarctic tourism regulation should be. Approximately half of the study participants seemed to prefer more formal regulation involving official, strict regulatory mechanisms and less reliance on voluntary guidelines and compliance. However, the remaining participants agreed that both formal and informal Antarctic tourism regulation had their place. Whereas official measures helped to establish a level playing field and introduce standards for all stakeholders, informal guidelines depending more on peer pressure, goodwill and cooperation of stakeholders allowed tour operators to react to changing situations and strengthen the linkages and informal codes of conduct that existed between them. Formal regulation usually involved mandatory measures and the possibilities for introducing high and rigorous penalties for non-compliance, but

they were often time-consuming and difficult to negotiate, adopt, enforce and amend, resulting in a rather inflexible regulatory framework. For this reason, informal guidelines should complement the regulatory framework as they provided flexible means to react to new developments, whilst peer pressure made their use reasonably effective. Stimuli for the development of new regulatory mechanisms from tour operators should be welcomed by ATCPs. Should informal guidelines fail to result in the desired changes in behaviour or operations, governments could still consider formal regulation.

6.3.2 The cornerstones of a desired regulatory framework

As illustrated in the preceding sections, the Delphi study participants were generally of the opinion that Antarctic tourism had to be adequately regulated in order to maintain the principles of the AT and to protect the Antarctic environment such that its wilderness character and the integrity of Antarctic ecosystems could be sustained. For tourism regulation to be considered 'adequate', various requirements had to be met. The participants' views with regard to these regulatory requirements were tested in the first and second rounds of the Delphi study and are presented in this section. Overall, the opinion dominated that whereas tourism regulation through the ATCPs and IAATO worked reasonably well at the moment, various improvements were necessary to enable effective responses to the challenges Antarctic tourism development might pose in the future. However, one participant maintained that there was sufficient regulation in place at the moment, and that states only needed to have the political will to implement and enforce it.

6.3.2.1 Components of an integrated regulatory framework for Antarctic tourism

The study participants elaborately expressed their viewpoints with respect to the components of an integrated regulatory framework for Antarctic tourism. For greater clarity, the collated responses are presented in Table 6.3.3.

Table 6.3.3: Cornerstones, components and characteristics of an integrated regulatory framework

General characteristics	Features	Activities	Cornerstones
Clear and consistent	Well-conceived and achievable aims	Interpretation of guidelines	Integrated regulatory instrument
Simple and equitable	Cost-effective application	Regular monitoring	Observer programme with trained and independent observers
Comprehensive and all encompassing (encompassing all aspects of tourism and all operators)	Accountability for all stakeholders; experiences and knowledge of all stakeholders should be considered	Tour operators should file EIAs to CEP (similar to scientific programmes)	Combining mandatory, non-mandatory and self-regulatory elements (e.g. site-specific guidelines, codes of conduct)
Strategic approach (looking at issues in a 5–10 year timeframe)	Human ethics and values are of importance	Provision of education and ambassadorship	Disaster response policy, and search and rescue capacity
Cooperative (equal roles for government and operators)	Reliable and accurate communication between parties	Regular evaluation and review	Accreditation scheme for tour operators in conjunction with industry self-regulation

General characteristics	Features	Activities	Cornerstones
Based on reliable scientific data (balance required: (social sciences and natural sciences should inform decision making))	Measurable outputs	Determination of carrying capacities of tourism destinations	Central tourism commission to act as a point of contact for all tour operators, grant permission for tourism operations, keep the records

The above table outlines the components of an 'ideal' integrated regulatory framework for Antarctic tourism as perceived by the study participants. It highlights the importance of cooperation, consistency, comprehensiveness and rigour whilst proposing fairness, wide acceptance, and vision. In terms of cooperation, a participant suggested that equal roles for government and operators could be achieved through a council comprising 50% operator seats and 50% government seats. Altogether, the participants stressed that the integration of provisions of the Protocol and ATCM recommendations (measures, decisions, resolutions) into a coherent regulatory framework as well as the integration of industry and ATPs were essential. Further, Third Party states were to be involved and actively engaged in discussions in order to address flag-of-convenience issues. Third Party states could be invited to observe ATCMs, which would help to address political matters as well as operational and technical issues. However, whereas the study participants stressed a cooperative approach of ATCPs and tour operators, they also accentuated that the ATCPs should have a dominant role and appoint officers for a central tourism commission or implement the accreditation scheme.

Whereas the cornerstones and characteristics of a desired integrated regulatory framework for Antarctic tourism detailed in Table 6.3.3 indicate the direction future tourism regulation in the Antarctic might take, the actual nature of this regulatory framework remains elusive. It is necessary to look at the potential design of such a framework and examine whether an overarching regulatory framework is needed to achieve the qualities outlined in Table 6.3.3, or whether the existing regulatory regime for Antarctic tourism, which is largely defined through ATS and industry self-regulation, can be strengthened to exhibit these qualities. Further, one should not rule out that the current regulatory framework might already possess the aforementioned characteristics, or at least some of them.

6.3.2.2 An overarching regulatory instrument for Antarctic tourism?

In fact, in concurrence with the previous remark, three study participants stated that a new overarching regulatory instrument for Antarctic tourism was not needed as it might undermine existing Protocol and ATS regulations. Separate rules for tourism would imply a move away from a consistent, comprehensive regulatory framework for all human activities in Antarctica and might culminate in the development of separate sets of rules for different Antarctic communities. Hence, a new overarching regulatory instrument singling out tourism could be considered as discriminatory and would also suffer from the main disadvantage that the development and ratification of such an instrument would take five to ten years, which would make it unable to deal with current issues.

The other study participants concluded that a separate, dedicated regulatory instrument for Antarctic tourism would generally be beneficial as it could capture all relevant and necessary tourism-related regulation in one document. It would restructure existing instruments, would make effective dissemination easier, could refine and consolidate exist-

ing measures and add new ones. However, they also pointed out that there might be impracticalities attached to developing a new overarching regulatory instrument. First, it would be very difficult to reach consensus. National inconsistencies regarding implementation as well as liability issues would continue to exist, and finally “it would detract from the holistic intention of the Protocol, which applie[d] to all activities and divide[d] its annexes in accordance with the environmental impacts it s[ought] to prevent rather than [in accordance with] activities it s[ought] to control”.

Two participants envisioned a separate Protocol Annex on tourism, which should illustrate a functioning partnership between all stakeholders and, which policy-makers and the industry should formulate cooperatively. Further, any overarching regulatory instrument would have to be complete, fair and flexible enough to deal with new developments. A dedicated, separate Antarctic Tourism Convention was regarded as being the ideal strategic regulatory instrument by three participants, although they acknowledged the bureaucratic complications to pass and implement the provisions of another convention. For these reasons, the study participants argued that a separate Protocol Annex might be a more feasible solution.

6.3.3 An exploration of various regulatory mechanisms

To effectively regulate Antarctic tourism in pursuit of maintaining Antarctica’s wilderness character and ATS principles, a variety of mechanisms involving current or potential regulation through the ATS were mentioned as potentially effective future regulatory mechanisms. As examples, a capped landing-permit system, port-state control of tourist vessels/aircraft and application of the Protocol were repeatedly raised. Independently, the Protocol was considered successful by approximately two-fifths of the study participants as it attempted to apply broader principles for area protection.

The suggestions brought forth by the Delphi study participants largely coincided with the succinct listing of suggestions made by interviewees on how current regulatory mechanisms could be improved presented in Chapter 6. Briefly, these suggestions shall be reiterated:

- The presence of independent observers on board of IAATO vessels in order to audit operator compliance;
- The adoption and implementation of an accreditation and certification scheme;
- A designated staff training programme for tour operators in order to achieve general standards among expedition staff, under consideration of a ‘grandfathering system’ and maybe even a requirement of a minimum number of years of experience in Antarctica for expedition leaders.
- A better regulation of the vessels and the adoption of a standard for ice-strengthening.
- A higher staff-to-tourist ratio during landings in order to adequately monitor the behaviour of tourists on shore.

In addition to the suggestions listed above, the study participants also brought up ideas regarding comprehensive site-specific guidelines, codes of conduct for operators and tourists, deregistration of offenders, better port-state control, shipping regulation, territorial supremacy or zoning, landing permits, and education. Almost all study participants

believed that the education of tourists and the public about Antarctica was essential to making people more aware about the environment they visited. Education would further result in greater understanding with respect to certain rules and regulations when visiting Antarctica and make visitors more passionate about protecting Antarctica and appreciative of the importance of maintaining a dedicated regulatory framework to preserve the wilderness and scientific values of Antarctica. Specific attention was focused on site-specific guidelines as regulatory mechanism. Four study participants considered the site guidelines to be very successful, eight considered them to be successful, and four participants viewed them as mildly successful.⁶⁵ As the site guidelines had not been in place for long any judgement would be premature, but participants remarked that they looked promising. Half of the study participants viewed the site-specific guidelines as highly desirable regulatory mechanisms, and about a third of the participants saw them as definitely feasible or possibly feasible. In the following subsections, a few other mechanisms are looked at in greater detail.

6.3.3.1 Benefits and important features of an accreditation scheme for tour operators

An accreditation scheme for Antarctica tour operators was envisioned as promising operational benefits and standardisation among tourism organisers in such a way that a level playing field would be maintained. Moreover, the potential for capturing all operators was of significance. Additionally, study participants commended the transparency, motivation and incentives such a system would produce. They argued that an accreditation scheme would encourage ethical tourism, better cooperation among tour operators, and quality of operations. An accreditation scheme might provide incentives for the “less good to strive for the better”.

When talking about important features of an accreditation scheme, fundamental characteristics such as transparency, accountability, the simplicity of the system, flexibility and comprehensiveness in terms of coverage were frequently mentioned. In terms of operational features, standards for training and experience of staff, environmental and safety standards; audit and review mechanisms were acknowledged as being equally important. A more detailed summary of the most important features of an accreditation scheme from the viewpoint of the study participants is presented in Table 6.3.4.

Table 6.3.4: Important features of an accreditation scheme for Antarctic tourism

Category	Compiled and summarised responses	#
Operational features	Standards for training and experience of staff and key personnel as well as environmental standards, including clearly defined environmental codes of conduct (e.g. to ensure the utilisation of eco-friendly equipment), are essential. Further, regular independent audit/review mechanisms and penalties for non-compliance (e.g. deregistration from the scheme or IAATO) as well as a period of provisional membership have to be introduced.	20
Fundamental characteristics	The scheme should be transparent and visible, accountable, flexible, impartial and independent, internationally accepted and credible, not overly complex and bureaucratic, open to new members as well as outcome-oriented.	18

⁶⁵ 10 study participants reserved their judgement as it would be too early to comment on the success of only recently implemented guidelines.

Category	Compiled and summarised responses	#
Organisational structure	Opinions are divided about the overall control over the system. Whereas some study participants see the primary responsibility for practical implementation, development of standards and the execution of the scheme, with IAATO, others give greater power to the ATCPs who should execute and oversee the scheme. They should also endorse the standards and be involved in the design of the scheme. Further suggestions include the creation of an accreditation commission consisting of scientific operators, NGOs and policy-makers.	10
Basis	Although there should be some detachment from IAATO, the scheme should essentially be based on IAATO guidelines and tightly coupled to current and emerging ATS and best international standards.	4

6.3.3.2 Potential for port-state jurisdiction to play a greater role

Three quarters of the participants who passed judgement on the issue of port-state control saw a potential for port-state jurisdiction to play a greater role in regulating Antarctic tourism as it might support the ATS regulatory framework. The inspection of permits (for Treaty members), proof of accreditation and checks whether operations and vessels/planes met AT standards were named as examples of how port-state jurisdiction could come into play. However, there were thought to be a myriad of policy changes required and at least as many problems associated with achieving effective port-state jurisdiction. Among the problems that were mentioned by study participants, were the wider implications of port-state jurisdiction, because it would substantially alter the basis for inspecting vessels in port to include inspection of ‘future activities’ as opposed to the inspection of the current status of the vessel only. Further, there might be additional potential for port-official corruption and questions of sovereignty of certain departure ports might be reiterated. Three participants considered port-state jurisdiction as unfit as it extended beyond the regulation of Antarctic tourism or would simply be unfeasible.

6.3.3.3 Zoning of tourist areas as a potentially powerful management mechanism?

Just over one-third of the study participants considered zoning⁶⁶ to be a potentially useful instrument to manage site visits, depending on how well planned, executed and enforced this instrument was. Care needed to be taken as zoning might speed up the destruction of certain sites rather than naturally spreading the impact of tourist visits. The remaining study participants regarded zoning as a very effective tool for visitor management because it represented a proven mechanism that worked well in other fragile ecosystems and because the protected area framework established by the Protocol and site-specific guidelines already provided the foundation for well thought-through zoning. Some of the participants specified various possibilities for zoning, i.e. the establishment of zones within which certain (larger) ships might operate, although this could be complicated by the fact that as ice coverage changed throughout the season and over the years, established zones could change their character. One participant provided a thorough overview of the different options available for zoning and a rationale for the use of zoning in Antarctica:

⁶⁶ Zoning refers to the designation of areas for specific purposes. For instance, “no-go zones” could be created around certain landing sites in Antarctica to establish sanctuaries for the wildlife. Further, tourism sites could be zoned according to permitted and forbidden activities, visitation rates and lengths, times of visits, etc.

Larger scale zoning could include maritime ‘go/no-go’ areas for ships – depending on their construction characteristics or it could identify ‘honey pot’ and no-go areas on land. Zoning could also be used for defining where certain activities are permissible and where they are not. We need to get away from the notion that all of Antarctica is freely available, in access terms, to all people for whatever purpose. In land management terms, zoning is considered a normal, legitimate and valuable mechanism. I therefore see no reason why the principle should not extend to the Antarctic.

6.4 Concluding thoughts

If tourism was to be banned there would be illegal trips there all the time, just as there is illegal and unregulated fishing under some unusual national flags. (A study participant)

This Chapter has outlined the results of the Delphi study in order to enable the utilisation of stakeholder viewpoints for the discussion and assessment of potential options regarding the regulation of Antarctic tourism in the future. Stakeholder viewpoints with regard to the current regulatory regime, development and trends in Antarctic tourism as well as future regulatory options are presented. The discussion of the stakeholder perspectives presented above focuses on the four cornerstones of present and potential future Antarctic tourism regulation (What? Who? Where? What?⁶⁷), which were introduced in Chapter 2 and reiterated in the introductory section of this Chapter.

In order to combine the results of the Delphi study presented in this Chapter in pursuit of discussing the aforementioned cornerstones of Antarctic tourism regulation, a condensed overview of the main arguments presented by the study participants shall be given. Overall, the results of the Delphi study are internally consistent as the replies to the various questions validate and support each other as shown in Table 6.4.1.

Table 6.4.1: Summary of the assessment of tourism regulation through the ATCPs/ATS and IAATO

	ATS	IAATO
Main strengths	<u>Legal regulatory power</u> <ul style="list-style-type: none"> - legitimacy - stability - holistic approach - recognition & acceptance 	<u>Procedural capacity</u> <ul style="list-style-type: none"> - active & quick decision-making - flexibility - immediate application - capacity to adequately respond to emerging issues
Main weaknesses	<u>Procedural problems</u> <ul style="list-style-type: none"> - slowness - cumbersome decision-making - constrained by consensus - high costs 	<u>Suitability/regulatory power</u> <ul style="list-style-type: none"> - inappropriateness - possibility of undermining ATS regulation - strained relationship with ATCPs

Procedural problems bemoaned as the main weaknesses of the ATS by the study participants, correspond to procedural qualities of the self-regulatory body, highlighting that flexible, active and innovative decision-making in response to emerging issues is rated highly. Similarly, regulatory power – including the legitimacy, recognition and wide acceptance – is consistently considered as an important aspect of tourism regulation. In order to discuss the cornerstones of a desired regulatory regime for Antarctic tourism, it is necessary to briefly comment on the success and usefulness of the Protocol and the site-specific guidelines, as these mechanisms received much attention from the

⁶⁷ To remind the reader, these questions were: What are the overall goals of tourism regulation? Who (should be responsible for the design, implementation and policing of regulatory instruments)? Where (are these regulations going to be of importance; i.e. site-specific regulation vs. general regulation)? What (regulatory mechanisms are the most desirable and feasible)?

study participants. The Protocol was regarded as forming the backbone of the regulation of human activities in Antarctica and was generally considered as successful to mildly successful. Opinions among the study participants were divided as to whether the Protocol needed strengthening, but they agreed that inconsistencies in the implementation of Protocol provisions were concerning and should be addressed soon. The site-specific guidelines were regarded as successful in that they provided a benchmark for tourism activities at various sites and in that they presented an adequate and clear management prescription. For this reason, the study participants recommended that site-specific guidelines be developed for all important and frequently visited sites.

As Figure 6.4.1 (on Page 158) shows, the study participants generally favoured a cooperative, strong and, at the same time, flexible regulation of Antarctic tourism, with a dominant role in the design of, voting for, enforcement of and monitoring/policing of regulatory mechanisms being assigned to the ATCPs. Nonetheless, the active participation and input of IAATO and individual tour operators are necessary to ensure the design, effective implementation and enforcement of feasible and workable regulatory mechanisms. The latter should represent a combination of binding and non-binding instruments to provide for both regulatory power and the flexibility to react to emerging issues. Interestingly, the examples given of specific regulatory mechanisms reflect current discussions among the ATCPs, e.g. with respect to shipping regulations (ATCM 2007c) and port-state control (ATCM 2007d), and IAATO with respect to an accreditation scheme and staff training programme (IAATO 2007e).

The dominance of input by ATCPs in Figure 6.4.1 also reflects the participants' opinions regarding the stability and success of the Treaty regime. The ATS was generally regarded as being stable and having matured over the years, although participants also remarked that the regime had not been tested to a great extent. Tourism development in the Antarctic may well prove to be a first test of the stability and success of the ATS. Indeed, various aspects of the current or anticipated future development of Antarctic tourism were viewed with concern by the study participants. The overall increase in scale of Antarctic tourism operations – including an increase in visitor numbers, an increase in large vessels operating in Antarctic waters, an increase in the number of yachts in the Antarctic, and a diversification of activities – were amongst the most concerning trends. As a result, the pressure on the Antarctic environment was feared to increase, accompanied by a decrease in Antarctic intrinsic values and growing risks of serious accidents and catastrophes.

Correspondingly, participants expressed the desire for Antarctic tourism development to be limited in scope and scale, for a continuance of largely small-ship tourism, for preventing the erection of permanent infrastructure in Antarctica, and for a responsible and comprehensive regulation of Antarctic tourism in the future. Once again, these results illustrate the internal validity and consistence of the data collected through the Delphi study. They further support the conclusion that beliefs and opinions held in the Antarctic community are firm and coherent. This observation was supported by the strong correlation between responses given in the first and second round of the study and backs up Bauer's (2001) conclusion that Antarctic tourism stakeholders have strong convictions with regard to how tourism should be conducted and regulated. Further, the internal validity and consistence of the data collected during the two rounds of the study, made the conduction of an additional round unnecessary.

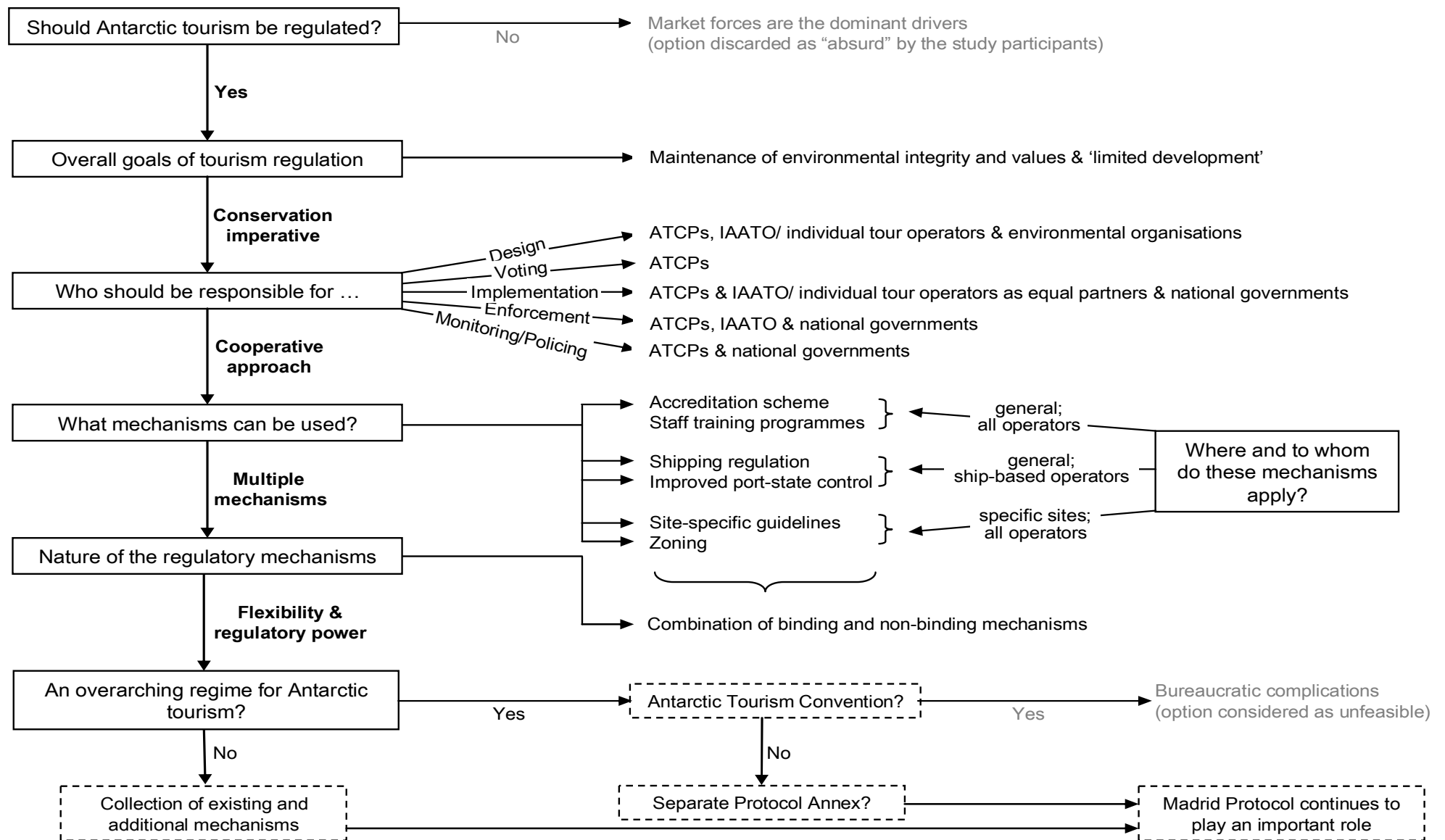


Figure 6.4.1: Illustration of the cornerstones of a desired regulatory regime

Essentially, the aforementioned observations regarding the firm beliefs held by Antarctic tourism stakeholders as well as their outspokenness and technical, legal, and operational knowledge make the Delphi study a valuable tool for the collection of well thought-through and well-explained opinions on Antarctic tourism regulation. The anonymity of a Delphi study, which allows participants to freely offer even the most controversial and unpopular views, provides for a great bandwidth of knowledge and ideas being made accessible to a researcher. Further, the Delphi study offers the opportunity of inviting participants to provide their responses remotely and in their own time through the utilisation of internet survey tools. This added flexibility does not only save costs for the researcher, but enables greater access to tourism stakeholders, which are often pressed for time. The latter, however, represents a disadvantage as well – often the busy schedules of Antarctic tourism stakeholders prevent them from participating in studies on the very subject of Antarctic tourism. Here, previously established contacts and reliable communication can help to overcome the relative ‘inaccessibility’ of some stakeholders. Generally, a Delphi study was found to be an adequate and helpful tool to collect a rich array of data to support an in-depth analysis of Antarctic tourism regulation.

In the following Chapter, the main inferences from the Delphi study will be linked with the results from the interviews in order to evaluate and discuss the effectiveness of the Antarctic tourism regulatory regime from the viewpoint of regime theory as introduced in Chapter 4.

CHAPTER 7



7 Consolidated lessons: from practice to theory and vice versa

The sustainability of tourism is inevitably related to the continuing existence and “wellbeing” of natural resources, which enable and promote it. (Ryel & Grasse 1991, p. 164)

This Chapter integrates the results of the interviews and the Delphi study as presented in Chapters 5 and 6 into a conceptual discussion of regime effectiveness. The basis for the conceptual discussion of the effectiveness of the Antarctic tourism regime has been established in Chapter 4, where the author argued that

- (a) There is a necessity to regulate Antarctic tourism,
- (b) Antarctic governance in general assumes a conservation imperative, and
- (c) A few problematic normative, operational, sovereignty and ethical issues complicate Antarctic tourism regulation and challenge stakeholders.

Chapter 4 further ascertained that Antarctic tourism regulation be considered a regime encompassing ATS and IAATO regulation with the purpose of addressing the ‘problem’ of tourism development in Antarctica and all associated concerns. The discussion in this Chapter uses the concept of regime effectiveness as detailed in Chapter 4 in order to evaluate the effectiveness of Antarctic tourism regulation based on the results of the qualitative research. The findings from the interviews and the Delphi study are consolidated with the concept of regime effectiveness and compared to previous studies on various aspects of regime effectiveness of the ATS. Then, this Chapter discusses the building blocks for an effective and adequate Antarctic tourism regulatory regime. It assesses which elements of the current regulatory regime should remain in their current form and which aspects might be desirable to change.

7.1 The effectiveness of Antarctic tourism regulation

... the Antarctic is one of the few places in the world where concerns to protect competing views on sovereignty can be credibly presented as environmental awareness, thereby allowing states to be parochial and green at the same time. (Stokke & Vidas 1996, p. 442)

As explained in Chapter 4, regime effectiveness can globally be seen as the quality of regulatory actions or processes leading to a desired outcome. One of the prime determinants in regime effectiveness relates to positive behavioural change in regime members to solve the problem the regime was established to address (Stokke 2007; Ward 2006; Seelarbokus 2005; Underdahl 2002; Hisschemöller & Gupta 1999; Young 1998; Levy 1996; Stokke & Vidas 1996; Young 1994). Consequently, regime effectiveness can only be discussed in relation to the specific problem the regime is meant to concentrate on (Stokke & Vidas 1996, p. 452). Young (1998) acknowledges the following five main determinants of regime effectiveness:

- problem structure (coordination versus cooperation problems),
- regime attributes (regime design: decision-making procedures, enforcement, monitoring, flexibility),
- social practices (behaviour and cooperation),
- institutional linkages, and

- the broader setting within which a regime operates.

The problem structure can be assessed through the analysis of stakeholder perspectives regarding what they conceive to be the goals and intents of Antarctic tourism regulation, and how they would like Antarctica to look in the future. The latter also indicates where the interests of the respective stakeholders lie such that conclusions can be drawn on the level of alignment or divergence of interests.

In the context of this thesis research and in conjunction with the opinions of the majority of the research participants, regime attributes have been identified as important determinants of the success of an Antarctic tourism regulatory regime. Particularly, regime robustness, flexibility and transparency are indicative of the stability and adequateness of a regime. As mentioned in Chapter 4, this thesis research focuses its attention on the analysis and discussion of regime attributes, because the latter are indicative of the sustained success of an Antarctic tourism regime, which is confronted with highly dynamic operational characteristics and a rapid development.

Social practices are expressed in the behaviour of Antarctic tourism stakeholders and the complex networks of relationships that exist between members of the regime and other actors. The social practices of the Antarctic tourism regime are reflected in the narratives of Antarctic tourism stakeholders and are not discussed in detail in this thesis as they have a considerable influence on procedural issues, the motivation for implementation and enforcement of regulation, questions of transparency and cooperation. Therefore, they can be considered as co-determinants of regime attributes and will be discussed in conjunction with the latter.

As established in Chapter 4, the Antarctic tourism regime is a fusion of ATCP and IAATO regulation of Antarctic tourism, which places the institutional linkages between the ATS and IAATO at the heart of the regime. Levels of mutual respect, recognition, acceptance and cooperation are important aspects considered in the discussion in this Chapter. Linkages to other institutions such as the IMO, the HCA or UNEP are acknowledged, but not central to the discussion.

As indicated in Chapters 1 and 3, the broader setting within which the Antarctic tourism regime – a separate regime nested in the wider framework of the ATS – operates, is highly complex and multi-faceted. Changes in the wider geopolitical context, global environmental and climate issues, or economic factors can have a considerable impact on the stability and success of the Antarctic tourism regime. However, a detailed analysis of potential global influences goes beyond the scope of the thesis and is therefore omitted.

This section concentrates on discussing Young's (1998) main determinants of regime effectiveness and follows the same structure. However, for reasons outlined above and in Chapter 4, this thesis research focuses on regime attributes and particularly procedural issues. Therefore, the problem structure or focus is only briefly introduced, followed by a detailed discussion of regime attributes and components. Further, it is considered, whether measures can be or have been successfully implemented and enforced, and whether they lead to the desired outcomes. In the final subsection, social practices and institutional linkages are briefly considered together with other important issues determining the effectiveness and sustained success of the Antarctic tourism regime.

7.1.1 Problem structure and regime goals

Although Stokke & Vidas (1996, p. 440) maintain that the Antarctic tourism regime has not been given a particular problem structure as the regime is still in its infancy, the nature of the policy problem to be addressed by the regime can be identified. As argued in Chapter 4, the ATS and the nested Antarctic tourism regime, focus on cooperation problems, as diverging interests of different stakeholders are present. Young (1998, p. 273) establishes that coordination problems are easier to solve than cooperation problems because with the former interests are aligned, incentives to deviate are weak and an effective coordination of activities is all that is required. Despite being more difficult to solve *per se*, the cooperation problem confronting Antarctic tourism stakeholders is made more manageable through greater incentives for cooperation, which commonly exist in long-lasting regimes such as the ATS (Young 1998, p. 274).

Having established the nature of the policy problem underlying the Antarctic tourism regime as a cooperation problem, one can look into the character of this cooperation problem based on stakeholder perspectives presented in Chapters 5 and 6. There is a close relationship between the policy problem to be addressed and the overall goals of the regime, which determine to what ends a policy problem should be addressed. The previous two Chapters showed that the research participants would want Antarctica to maintain its wilderness character and ecological integrity. They further expressed the desire that Antarctic tourism should continue to be of a relatively small scale and should remain largely ship-based and responsible expedition tourism that would not involve permanent land-based infrastructure being erected⁶⁸. These desired general goals of Antarctic tourism regulation can be considered as defining the problem structure of the regime as it faces increasing numbers of tourists, larger ships visiting Antarctica and changes in the industry. The resistance to the changing character of Antarctica and Antarctic tourism under consideration of the growth Antarctic tourism experiences translates into a policy problem that focuses on controlling change and limiting its negative consequences, a focus which is reflected in the literature (Johnson & Kriwoken 2007; Molenaar 2005; Bastmeijer & Roura 2004; Hemmings & Roura 2003; Polk 1998; Dingwall & Cessford 1996; Hall 1992). Consequently, the Antarctic tourism regime makes use of a set of legal and paralegal instruments to control Antarctic tourism development in order to prevent undesired changes from occurring.

Linked to the desire to maintain Antarctica's wilderness values in accordance with the environmental principles firmly established in the ATS through the Protocol is the necessity for the Antarctic tourism regime to acknowledge the pre-eminence of science in Antarctica. The latter is essential for the acceptance and legitimacy (Young 1998) of the Antarctic tourism regime because the protection of science in Antarctica is not only an important prerequisite for the overall ATS regime but has to be reflected in all sub-regimes and regulations in order to render them acceptable (Stokke & Vidas 1996, p. 445). Overall, the Antarctic tourism regime seems to be based on greater principles (maintaining the integrity of the Antarctic environment and the small-scale character of Antarctic tourism), a quality which might enhance its success because natural resource regimes are said to be more successful when they are founded on greater principles instead of focusing on singular issues (Young 1994, p. 74).

⁶⁸ Here, it is noteworthy that some of the existing infrastructure that had originally been erected in support of NAPs (e.g. runways and station buildings), is now used by and supports tourism (Johnson & Kriwoken 2007, p. 90).

The aforementioned goals of the regime that determine the character and structure of the policy problem to be addressed are of relevance for the design of the regime attributes. As described in Chapter 4, the way in which regime attributes are designed has a direct influence on how effective the regime can be (Gahlaut & Zaborsky 2004; Sprinz & Helm 1999; Young 1998; Stokke & Vidas 1996). They shall be discussed in the following sections.

7.1.2 Regime attributes: the essence of the regime

As explained in Chapter 4, this thesis research gives much weight to regime attributes as important determinants of the success, and essentially the effectiveness, of the Antarctic tourism regime. It has been established that the flexibility of a regime to react to new developments as well as the robustness of a regime to withstand external pressures are of particular importance for international environmental regimes (Young 1998; van der Lugt 1997; Stokke & Vidas 1996). Similarly, transparency and the promotion thereof are important factors for the effectiveness and functioning of regimes (Mitchell 1998). Finally, the way rules are decided on, designed, enforced, monitored and complied with represent significant aspects that influence regime effectiveness (Levy 1996).

This section discusses the aforementioned regime attributes – flexibility vs. robustness, transparency, decision-making, enforcement, monitoring and compliance procedures under consideration of stakeholder perspectives and academic literature.

7.1.2.1 Flexibility and robustness of the Antarctic tourism regime

Flexibility, which Young (1994) defines as the capability of a regime to adapt to changing parameters without sacrificing its identity, is of utmost importance if a regime is to be robust (Young 1994, p. 76). Robust resource regimes are likely to have reached a well-maintained balance between comprehensiveness and workability, implying that they have “a broad enough scope to encompass activities that impinge on each other” (Young 1994, p. 75). This is an important observation applicable to both the Antarctic Treaty System and to the Antarctic tourism regime, both of which, gaining in complexity as the consideration of more and more issues and stakeholders becomes necessary, lose some of their workability.

As flexibility is measured in a regime’s capability to react to new developments adequately, anticipated and potential developments in the Antarctic tourism sector have to be outlined. The research participants generally expressed the expectation that the future development of Antarctic tourism would be characterised by further growth in scale, diversification and increasing numbers of large vessels visiting the Antarctic, which finds support in the literature (Bertram 2007; Bertram *et al.* 2007a&b; Enzenbacher 2007; ASOC 2006). In particular, concerns were voiced regarding safety and rescue operations should accidents occur (see also Bertram 2007), bio-security and waste issues and the landings of larger vessels. Growing numbers of tourists visiting Antarctica might result in increasing pressures on frequently used landing sites, and logistical complications. A significant growth in land-based tourism, especially if accompanied by the erection of permanent infrastructure, was further feared by most research participants, a fear which is reflected in the literature (e.g. ASOC 2003b & 2007c; Enzenbacher 2007, p. 163; Johnson & Kriwoken 2007, p. 90). Nonetheless, according to some *organisers*, due to the sheer costs associated with land-based tourism, no

considerable growth was to be expected in the near future. Here, however, it was said to be important to contemplate two distinctive stimuli for a potential increase in land-based tourism in the future: firstly, the issue of tourist accommodation becoming increasingly available on scientific stations in Antarctica, and secondly, the possibility for small-scale, expedition ship-based tourism, opening up the interior to some extent by overnight camping, hiking or climbing expeditions.

As argued in Chapter 4, the ATS possesses an in-built flexibility testified through its ability to amend the current regulatory framework with new mechanisms adopted during ATCMs. Being nested within the wider framework of ATS, the Antarctic tourism regime exhibits similarly flexible characteristics. Nonetheless, the research participants articulated their concern regarding the lack of flexibility of the ATCPs with the consensus process slowing the system down and preventing quick reactions to new developments, an observation confirmed by Bastmeijer & Roura (2004, p. 776), Lee (2005) and Enzenbacher (2007, p. 160). Lee (2005, p. 76) argues that the in-built flexibility and bifocalism of the ATS are as much ingredients contributing to the success of the regime as they contribute to the weakness in enforcement. Parties can put politically sensitive matters aside and focus on issues of mutual benefit, which are then addressed through an array of largely hortatory regulatory mechanisms (Lee 2005, pp. 84–85). Enforcement is consequently made dependent on the goodwill of ATPs, outside pressure and environmental consciousness of stakeholders (Lee 2005, pp. 84–85).

IAATO and industry self-regulation, however, were praised for their responsiveness and their abilities to react quickly to new developments and implement agreed measures virtually instantaneously. This observation is supported by examples from the academic literature (Landau & Splettstoesser 2007; Bastmeijer & Roura 2004; Richardson 1999). The research participants considered the self-regulatory system to exhibit significant flexibility, which could partially compensate for the slow and cumbersome decision-making processes the ATCPs had to undergo if industry self-regulation received adequate governmental support and acceptance. For these reasons, and in anticipation of the aforementioned potential development Antarctic tourism might experience, the participants hoped that a high level of cooperation between ATCPs and IAATO, expressed through pragmatic and sensible synergies, would be established and maintained. Such cooperation would not only allow the Antarctic tourism regime to benefit optimally from the in-built flexibility of the system, but would also strengthen the regime itself and increase its robustness.

By integrating tour operators within IAATO into the regime and securing their participation through a cooperative approach, the Antarctic tourism regime will gain internal cohesion and will be able to better withstand external pressures and criticism. For once, the number of potential external critics will be reduced through an internalisation of IAATO input. In turn, this would increase the robustness of the Antarctic tourism regime, which so far has not been tested to a great extent. Albeit having to withstand criticism (see e.g. ASOC 2003b, 2007a, 2007c&d; Lee 2005) and having to deal with negative media exposure during the last two seasons as a result of incidents involving the M/S *Nordkapp* (ATCM 2007a), the M/S *Explorer* (ATS 2007) and the M/S *Fram*, the comprehensiveness and capabilities of Antarctic tourism regulation have not yet been extensively tested. So far, the majority of tour operators voluntarily adhere to environmental codes of conduct and aim at limiting their impact (Landau & Splettstoesser 2007; Mason &

Legg 1999; Riffenburgh 1998). Regulatory responses to the future development of Antarctic tourism and the consideration of exogenous pressures and criticism will show over time how robust the Antarctic tourism regime is.

7.1.2.2 Transparency of the Antarctic tourism regime

Regime transparency, which is defined through the supply of and demand for information, is an important factor of regime effectiveness (Mitchell 1998, pp. 109–110; Stokke & Vidas 1996). When looking at private or public institutions, high levels of transparency are said to encourage awareness, understanding and compliance (Weil *et al.* 2006). The same holds true for regimes such as the ATS, which are commonly institutionalised to some degree (Berguño 2000). However, Berguño (2000, p. 96) also remarked on the surprisingly low level of institutional growth the ATS exhibited, which was unusual for regimes dealing with cooperation problems. Consequently, he called for a greater degree of coordination and institutional development (Berguño 2000, p. 106), which has meanwhile been addressed by the establishment of a secretariat in Buenos Aires in 2004. The secretariat substantially contributes to greater internal and external transparency of the ATS as, for instance, it centrally disseminates information about the regime and its regulatory mechanisms (see www.ats.aq) or enhances information exchange between ATPs. The modernisation of the ATS, which involved the establishment of the secretariat, began in the 1990s, when active steps were taken to increase the transparency of the ATS. Berguño (2000, p. 101) writes:

Modernisation of the ATS ... has included the public availability of documents, circulation of Consultative Meeting reports, transmission to the UN Secretary-General of the Final Report of each Consultative Meeting, reviewing the Rules of Procedure of the Consultative Meeting to liberalise the participation of observers, inviting acceding states and NGOs to attend the Consultative Meetings, and designating SCAR⁶⁹, CCAMLR⁷⁰ and COMNAP⁷¹ as permanent observers to the Consultative Meetings.

This increasing transparency within the ATS⁷² extrapolates out to the Antarctic tourism regime, which, as argued in Chapter 4 and above, can be considered as a nested regime within the wider Treaty regime. With regard to tourism-related regulatory mechanisms adopted by ATPs (see Appendix 6), which are accessible in their entirety on the ATS website (www.ats.aq), the regime can be considered as transparent. However, where compliance-oriented transparency, which assesses levels of compliance by regime members (Mitchell 1998, p. 113), is concerned, improvements would be desirable.

⁶⁹ The Scientific Committee on Antarctic Research (SCAR) was set up in 1957 with the goal of initiating, supporting, coordinating and promoting scientific research in Antarctica. It is part of the International Council of Scientific Unions (ICSU) and gives independent and scientific advice to ATPs (Clarkson 2007, p. 827).

⁷⁰ The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), which came into force in 1986, serves the main objective of conserving marine life south of the Antarctic convergence and applies an ecosystem approach to managing marine resources (Miller 2007, p. 292; Cohen 2002, pp. 353–354).

⁷¹ The Council of Managers of National Antarctic Programs (COMNAP) was established in 1988 to facilitate the exchange of operational information and coordinate activities of NAPs to improve the efficiency and safety of operations and to promote “mutual support in the design, ongoing improvement, and operation of Antarctic facilities and transport infrastructure (Riffenburgh 2007, p. 309). Amongst others, COMNAP also has a Working Group on Tourism and Non-Government Operations in Antarctica, which focuses on all matters related to ship operations in support of NAPs.

⁷² According to Stokke & Vidas (1996, p. 433), the ATS has undergone significant changes after the adoption of the Protocol – environmental protection has been integrated as one of the main pillars on which ATS regulation rests, transparency has been increased and participation in the regime has grown.

Compliance-oriented transparency is closely linked to the monitoring of compliance, which was considered as inadequate by most research participants and will be looked at more closely in the following section. Adequate reporting of tourism activities to a central authority and the collation and availability of these reports were said to be lacking on the side of the ATPs, which might invite the hedging of information about a season's tour operations by IAATO, as no comparable data were available. Research participants commented on the possibility that negative effects of operator activities could be obscured or reports could be filtered due to the lack of arbiters or independent assessors and the strong reliance of the ATPs on truthful reporting by individual tour operators and IAATO.

However, the research participants praised the well-established communication networks, openness and transparency within IAATO, which allowed tour operators to exchange and share information amongst each other and with governments in an efficient and timely manner. As Weil *et al.* (2006, p. 176) point out, "transparency systems need to be designed for improvement". They argue that embedded requirements for feedback and assessment would allow for continuous improvements of the system and the integration of new developments and ideas (Weil *et al.* 2006, p. 176). While there will be a continuous need for adequate transparency within the Antarctic tourism regime, it seems to be a matter of political will, dedication and incentives to improve the current reporting, information-sharing and communication networks and balance the supply and demand of information within and between both components of the Antarctic tourism regime, the ATS component and the self-regulatory one. That way, the regime could best develop routines for feedback and self-assessment, which would also increase the acceptance and robustness of the regime.

Regime transparency can be increased by providing incentives for reporting, e.g. through the minimisation of practical and technical obstacles to reporting, and by discouraging decisions not to report (Mitchell 2004, pp. 124–126). First steps have already been taken by requiring tour operators based in Treaty states to submit pre- and post-visit reports (see Appendix 8) to their national authorities. However, thus far, an effective compilation and presentation of the reports received by all ATPs as a central, comprehensive documentation is wanting. Enzenbacher (2007, p. 163) suggests the development of a central ATS tourism database, which would enhance the transparency of the Treaty regime. Furthermore, a central tourism archive established at, e.g. the AT secretariat, would facilitate the analysis of tourism data on various aspects that might inform policy-making in the future (Enzenbacher 2007, p. 167). At the moment, the role of collecting Antarctic tourism statistics, which was previously coordinated by the US National Science Foundation, is solely resting with IAATO (Landau & Spletstoesser 2007, p. 202). IAATO collects information provided to them through post-visit site reports in a database detailing vessel and tour activities for each season (IAATO 2007b). Furthermore, with their web-based ship scheduler IAATO introduced a powerful tool that not only allows for improved site-specific management (Landau & Spletstoesser 2007, p. 202), but increases internal transparency as it collates and disseminates information about operators' Antarctic itineraries (IAATO 2007b). Nonetheless, some difficulties remain regarding the correct recording of yacht operators' activities or the accurate accounting of expedition staff, lecturers and naturalists (Bertram 2007, p. 155).

Overall, the last decade has seen considerable improvements of regime transparency, and internal communication channels are well established, particularly within each of the two main compartments of the regime determined by

ATPs and IAATO. However, as inter-compartmental transparency is concerned, some obstacles remain, originating from the imbalance of power between the ATCPs and IAATO as well as a continuing distrust by governments towards industry self-regulation.

7.1.2.3 Design of rules, decision-making, enforcement, monitoring and compliance

The majority of the research participants recognised the ATS as a suitable, acceptable and legitimate overarching governing body for Antarctic tourism, which offered a range of regulatory tools addressing human activities in Antarctica. The desire that the ATS should remain strong in the future was expressed by the majority of the research participants. However, a few points of criticism were offered by most participants. These primarily focused on a lack of operational expertise (see also Enzenbacher 2007, p. 174), the apparently inequitable application of different standards to science and tourism, and the previously mentioned lack of flexibility of the ATCPs to react to new developments in an efficient and timely manner. Inconsistencies in the domestic implementation and enforcement of ATS regulation were bemoaned as a further weakness of tourism regulation through by the ATCPs. Bertram & Stonehouse (2007, p. 286) draw a similar conclusion with the criticism that “[t]here are neither mechanisms for enforcement, nor resources available to implement enforcement, of regulations relating to tourism under the Antarctic Treaty.” Enforcement processes largely remain with the individual national governments, and the resultant lack of coordinated enforcement is a considerable weakness of the ATS regime (Stokke & Vidas 1996, p. 450). Likewise, there are no strong, central institutional arrangements in place, which are capable of effectively monitoring compliance (Stokke & Vidas 1996, p. 450).

The weaknesses in enforcement⁷³ are inherently linked to the consensus rule. Measures only become effective upon the approval by all ATCPs, which implies that all Parties have to give their consent ensuring that compromise is valued and that minority opinions cannot simply be overridden (Lee 2005, p. 85). This gives each individual ATCP a considerable veto power if it chose to boycott any measure (Lee 2005, p. 85). However, aside from being criticised for slowing decision-making procedures down, the consensus rule was also commended by the research participants as it was said to result in agreements rather in compromises, which would later improve implementation and compliance among Parties.

As opposed to the aforementioned criticisms of enforcement and monitoring through ATCPs, the research participants considered enforcement, monitoring and policing processes through IAATO to be of a high standard. In order to maintain this standard, IAATO should aim for the inclusion of companies operating currently outside the industry association. In the future, companies operating outside IAATO could become a problem, which would lead to a deterioration of enforcement and policing standards. To remedy this situation, the ATCPs should grant IAATO more support and legislative power by, for instance, aiming for stricter port-state jurisdiction (see also Vicuña 2000) or strin-

⁷³ A principal criticism regarding weak enforcement of the ATS has been offered by Lee (2005, p. 74), who attributed this weakness of the ATS to its main determinants of success: the freezing of sovereignty claims and the bifocal approach of the Treaty regime. Whilst this approach has allowed ATCPs to put aside diverging interests originating from sovereignty issues and circumnavigate politically sensitive matters through focusing their policy-making on small regulatory packages with mutual benefits, it added a permanent enforcement defect to the system (Lee 2005, p. 74). Although Lee (2005) admits that, “the Antarctic Treaty system has managed Antarctica effectively to date” (Lee 2005, p. 76) and adopted a flexible approach of bifocalism, he also maintains that this flexibility contributes to the weaknesses in enforcement the Treaty regime suffers from (Lee 2005, p. 76).

gent regulation of station visits as explained in Chapter 5. Through these actions, IAATO would gain greater sanctioning power, which could provide greater incentives for companies to join IAATO and comply with self-regulatory mechanisms.

Generally, research participants commended industry self-regulation for its flexibility, and proactive and cooperative approach. An example of this flexibility and proactive approach is represented by a Special Meeting that IAATO organised in March 2008 to discuss potential options for an effective management and regulation of Antarctic tourism well into the future (Landau 2008). This meeting attempted to address implications of the continued growth and diversification of Antarctic tourism, such as marine safety concerns or potential cumulative impacts on the Antarctic environment. It further aimed at reviewing the effectiveness of current regulatory procedures with a focus on tourism and at discussing the future cooperation between IAATO and the ATPs to regulate Antarctic tourism effectively (Landau 2008)⁷⁴.

When considering mechanisms currently in place, research participants specifically highlighted the regulatory potential of site-specific guidelines, which were said to provide clear management parameters and benchmarks for operational conduct. Nonetheless, site-specific guidelines should not be considered as a panacea for neither they guaranteed operator compliance nor would they be very effective in restricting or regulating specific activities. ASOC (2006 & 2007b) considers site-specific guidelines to be of limited value unless they are embedded in a more general and wider regulatory system for Antarctic tourism. So far, site guidelines only exist for a select few sites and not for all sites visited by operators (Enzenbacher 2007, p. 161). Consequently, some research participants suggested that site-specific guidelines should be developed for the majority (if not all) tourist sites. Aside from the site-specific guidelines, the research participants did not provide particular comments on any other ATS-related regulatory mechanisms, with the exception of Recommendation XVIII-1, which though not yet officially effective (see Appendix 6) is applied in practice, and the Protocol. The latter could be regarded as a set of regulatory instruments, rather than as a specific mechanism, marking the dawning of a new era in the Treaty regime.

The Protocol is regarded as a yardstick in the development of the ATS, particularly with respect to its ability to quieten external criticism and accommodate voices that had urged for comprehensive environmental protection in Antarctica for some time (Stokke & Vidas 1996, p. 439). As a result, Stokke & Vidas (1996, p. 439) concluded that the

Protocol has been highly successful in taking the heat off outside pressure on the ATS. The UN critique has softened markedly, and leading critics among the environmental NGOs, like ASOC, now regularly attend Consultative Meetings.

Similarly, the Protocol benefits from wide, international acceptance, which grants the Protocol and the ATS additional legitimacy (Stokke & Vidas 1996, p. 439). Stokke & Vidas (1996, p. 442) attribute a substantial part of the success of the Protocol to its provisions banning activities that may have put stress on the delicate balance between non-claimant and claimant states, such as mineral resource exploitation. Therefore, the Protocol can be considered ef-

⁷⁴ The author did not yet succeed in obtaining a copy of the final report of this meeting, which promises to provide direction for policy-makers and operators by identifying options for the synthesis of regulation and self-regulation as well as necessary steps to be taken.

fective in its capabilities of prohibiting activities that would require a redistribution of resources (Stokke & Vidas 1996, p. 442).

In the same vein, research participants regarded the Protocol as successful in enshrining the principles of environmental protection and giving them a place within the ATS. Nonetheless, criticism was voiced concerning the Protocol's ambiguities, lack of clearly defined terminology and standards, and varying degrees of implementation by ATCPs. This criticism is reflected in the academic literature (Bertram 2007; Enzenbacher 2007; Lee 2005; Bastmeijer & Roura 2004; Hemmings & Roura 2003). As far as EIAs being the sole gatekeeper to Antarctica for tourism (Bertram & Stonehouse 2007; Hemmings & Roura 2003) are concerned, the terminology used in Article 3 and Annex I of the Protocol is unclear and imprecise⁷⁵. It provides much room for interpretation and only insufficient guidance (Ensminger *et al.* 1999, p. 19). The threshold levels determining what kind of EIA is required are merely defined by the rather fuzzy terms 'minor or transitory'⁷⁶, whereas the use of 'or' in that phrase still adds to the confusion⁷⁷ (Ensminger *et al.* 1999, p. 13). The term 'cumulative impacts' requires a more precise definition as well (Ensminger *et al.* 1999, p. 13) and by referring to 'existing and known activities', Annex I, Articles 2 (2) and 3 (2f) appear to limit the consideration of cumulative effects by excluding the impacts of past and potential future activities (Ensminger *et al.* 1999, p. 20).

Bertram (2005, p. 101) joins the chorus of other researchers (e.g. Enzenbacher 2007; Molenaar 2005; Hemmings & Roura 2003) in lamenting the incoherence of the Protocol provisions with respect to their domestic implementation and enforcement. The USA, for instance, allow IEEs to be submitted by more than one operator within one document (Bertram 2005, p. 101). The lack of comprehensiveness and lack of an overseeing authority has further been criticised (Bertram 2005, p. 101). The enforcement of Protocol provisions largely relies on the self-policing of Treaty Parties who have to implement, enforce and monitor compliance with respect to essentially all ATS measures through their domestic legislation (Lee 2005, p. 83). Procedures and strict requirements for monitoring have not been established under the Protocol so far, and although the behaviour of individual tour operators may be respectable and within the limits of their IEE, the use of a landing site by a number of different tour operators may result in unforeseen, undesired cumulative effects (Bertram 2007, p. 166). Research about environmental impacts of tourist vessels visiting Antarctica is still wanting and global effects of Antarctic tourism might cause additional concerns (Bertram 2007, p. 166). In addition to the ambiguity in the terminology and disparate levels of implementation, the lack of clear rules and procedures for the assessment of cumulative impacts and the lack of adequate instructions on how to assess or monitor impacts have been cited as limitations of the Protocol (Bertram 2007, p. 166; Bertram

⁷⁵ The deficiencies in the clarity of the meaning of 'minor' or 'transitory' were attempted to be overcome by numerous working papers and recommendations, with the SCAR Report (1997) being most acknowledgeable regarding the discussion of several refinements and suggestions. However, so far none of these suggestions – ranging from a matrix assessment technique to exemplar approaches – has found its way into the Protocol itself (SCAR, 1997). Nevertheless, especially the recommendatory papers brought forth by New Zealand in 1996 and 1997 suggesting *inter alia* that the term 'minor' refers to the magnitude of the impact, whereas the term 'transitory' refers to the duration, found wide recognition (Rothwell 2000, pp. 600–601).

⁷⁶ Ensminger *et al.* (1999, p. 15) interestingly suggest that these terms were purposely left imprecise, as the ATCPs found themselves under the immense pressure of setting up and concluding the Protocol in a very short time frame, and hence made sacrifices and concessions in order to ensure that all ATCPs sign the Protocol.

⁷⁷ According to Ensminger *et al.* (1999, p. 19), the term 'minor or transitory' should be interpreted as the requirement to initiate a CEE for any impact which is either more than minor (though it might well be transitory or less than transitory) or more than transitory (though it might be minor or less than minor).

2005, pp. 52–53; Lee 2005, pp. 81–82). In fact, generalised EIAs, which do not take peculiarities of individual sites into account, fail to provide effective protection of certain landing sites, and tour operators are given the responsibility for monitoring their own impacts without proper instructions or guidance (Bertram & Stonehouse 2007, p. 285).

According to Vicuña (1994) the Protocol, although a step towards more effective and comprehensive environmental protection in Antarctica, has not made a substantive contribution to the latter in that it fails to introduce extensive and effective mechanisms, for instance with respect to dealing with marine pollution. By comparison, Rothwell (1992) comments that despite it being negotiated and agreed in a very short timeframe, the Protocol promises to provide effective mechanisms for the ATS to deal with the minerals issue and incorporate more extensive and comprehensive mechanisms for environmental protection and management of the Antarctic. However, Rothwell (1992) also stresses that the Protocol will only be as strong as its implementation and enforcement mechanisms.

Currently, tourism regulation largely relies on EIAs as the sole gatekeeper to Antarctica, which is not considered sufficient (Bertram & Stonehouse 2007, p. 286; ASOC 2003b). As the EIA provisions were primarily created with NAPs in mind, they are not always suitable for all kinds of tourism activities (ASOC 2003b), and it is relatively easy for tour operators to circumvent the effort of filing a CEE, which would expose their operations to greater scrutiny (Hemmings & Roura 2003, p. 19). Consequently, it might become necessary to review EIA mechanisms and potentially update them to adequately address ‘transient’ tourism operations, which differ substantially in their character from government operations (ASOC 2003b). With regard to Antarctic tourism management, old-fashioned expedition cruising may entail difficulties especially where EIAs with their structured and pre-planned functional characteristics are concerned. Expedition cruising implies that whenever a certain landing is not possible or desirable, another landing site will be spontaneously steered for. Thus, old-fashioned expedition cruising hails the freedom of *in situ* changes of the cruise plan and cannot readily list ‘fall-back’ or alternative landing sites in the EIAs (Hemmings & Roura 2003, pp. 19–20).

7.1.3 Social practice, cooperation and other factors

The self-regulating Antarctic tourism operators were overall commended for their conscientious practice of Antarctic tourism, an observation that was confirmed by Bertram (2007, p. 167). Tour operators were said to be respectful of the Antarctic environment and generally willing to comply with existing guidelines, such as Recommendation XVIII-1. IAATO members saw IAATO as an environmental stewardship organisation, which comprises *organisers* who share a passion for Antarctica as well as the motivation to do their utmost to protect the Antarctic environment. This observation is emphasised by Enzenbacher (2007, p. 159), who states that,

In many respects, the industry does more than is required of it by the ATS, thereby setting a standard of conduct and cooperation for its Antarctic operations that is unparalleled.

Correspondingly, Landau & Splettstoesser (2007, p. 207) maintain that it is the responsibility of IAATO as an industry association to establish adequate control mechanisms and limitations such that the environmental and intrinsic value of Antarctica will be preserved.

The behaviour of IAATO tour operators is primarily guided by IAATO's bylaws (see Appendix 7) and various codes of conduct for a range of tour operations and activities. Codes of conduct⁷⁸ represent regulatory mechanisms aimed at tourist behaviour that are usually self-imposed, voluntary and self-regulated (Mason 1997, p. 152). They aim at guiding behaviour under certain conditions and target tourists, tour operators and members of host communities (Mason & Mowforth 1996; Mason 1997, p. 152). Environmental codes of conduct are valid means to increase operator awareness but they may need to be strengthened by government regulation to provide sanctioning measures, particularly for operators not subscribing to these guidelines (Hall & Page 2006, p. 331). Interestingly,

[s]anctioning has not been much of an issue on Antarctica, in part because it is so difficult to break the rules. The community is generally self-disciplined, so any sanctioning that does occur is usually informal. (Buck 1998, p. 68)

However, in a different context⁷⁹, Shimshack & Ward (2005) argue that empirical evidence shows that "large improvements follow even from modest sanctions, as long as they have economic 'teeth'" (Shimshack & Ward 2005, p. 538). It remains to be seen for how long Antarctic tourism regulation can operate without a properly established sanctioning system, the development of which would require a change to a regulatory regime that would be largely defined by binding mechanisms. The industry develops quickly and it seems that "...those who initiate advances in Antarctic tourism move faster than those who aspire to control it" (Bertram *et al.* 2007, p. 180). Therefore, it might be wise to consider potential future regulatory options, which entail possibilities for sanctioning non-compliance.

Decision-making within IAATO was said to be dominated by small-ship operators, who formed the active and avid core of the organisation. The cooperation and communication between tour operators was seen as very effective and successful. Indeed, according to Bertram & Stonehouse (2007, p. 287), the cooperative spirit among tour operators should be supported, but it might be essential to back self-regulation up with adequate enforcement mechanisms on the side of the governments. In the same vein, the research participants⁸⁰ expressed concerns with regard to the potential future development of Antarctic tourism, particularly regarding an increase in visitor numbers, and with regard to non-members of IAATO operating in Antarctica.

Some research participants pointed out that there would be practical limitations to the degree IAATO could effectively self-regulate. Generally, tour operators were said to pursue their business interests and that they therefore could not be considered as selflessly protecting the Antarctic environment. In fact, a conflict of interest could arise and operators might use the self-regulatory system to their advantage, which would erode confidence in the regulatory capability of self-regulation. Considering especially the expected increase in the number of operators offering trips to Antarctica and a potential rise in the number of non-IAATO operators, a unifying regulatory structure might be called for.

⁷⁸ Examples of international bodies working with or developing tourism codes of conduct comprise the World Travel and Tourism Research Council (WTTRC) and UNEP, which identified a list of specific objectives for codes of conduct (Mason 1997, pp. 152–153).

⁷⁹ Empirically analysing the importance of fines as deterrent for environmental pollution in the US American context, Shimshack & Ward (2005, p. 521) concluded that "non-monetary sanctions contribute no detected impact on compliance", but that despite this observation there seems to be "a current policy movement away from enforcement 'with teeth' to informational and advisory enforcement" (Shimshack & Ward 2005, p. 520).

⁸⁰ Throughout this Chapter, interviewees and the participants of the Delphi study are collectively referred to as 'research participants'.

Consequently, the ATCPs should be involved in Antarctic tourism regulation and should remain the ultimate gatekeepers to Antarctica.

The cooperation between the ATCPs and IAATO was considered as maturing and characterised by mutual respect, although some distrust in the industry organisation seemed to remain, which adversely affected an equal and strong partnership to some extent. However, the research participants acknowledged that whereas the ATCPs would want to continue dominating decision-making concerning Antarctic tourism regulation, the ATCPs valued and recognised IAATO's input and efforts. Indeed, high levels of cooperation and involvement of external actors in the policy-making processes have been lauded as a positive feature of the Antarctic tourism regime by public policy researchers (Stokke & Vidas 1996, p. 440).

In direct relation to the perceived weakness of the Protocol in terms of disparities in implementation as presented in the previous section, performance of the individual ATCPs regarding the implementation and integration of ATS regulation into domestic law was regarded as being very inconsistent, with some countries setting excellent standards and other performing poorly. However, as centralised control over, for instance, how countries implement Protocol provisions would be very unlikely, a uniform application of ATS regulations, or in this case the Protocol, was considered almost unattainable.

7.1.4 Concluding comments on the effectiveness of the Antarctic tourism regime

According to Young (1998, p. 272) the ATS is widely acknowledged as an effective, if not very effective, international regime that has been successful in governing the Antarctic (Young 1998, p. 141). Particularly its capacity for problem solving, through the discussions at ATCMs and the resulting activities, can be regarded as a good example of constitutive effectiveness (Young 1994, p. 74). What has helped ATCPs successfully govern the Antarctic resources when faced with issues surrounding use versus conservation was that economical interests in the exploitation of Antarctic resources have so far not been very strongly voiced, which is why ATCPs gladly subscribe to a conservation imperative in a region with only moderate forfeited economical benefits (Stokke & Vidas 1996, p. 451). The question whether the Antarctic tourism regime can equally be considered an effective regime cannot be answered unambiguously. As the previous sections have shown, the evaluation of the effectiveness of regime attributes and social practice is not straightforward because of the distinctive approaches of the two main regulating bodies. Nonetheless, the strengths and weaknesses of these two regulating bodies can be considered as complementary – where the ATS lacks flexibility, responsiveness and enforcement, IAATO seems to possess proactivity, flexibility and adequate mechanisms to ensure quick implementation and enforcement of agreed measures. On the other hand, as an industry organisation, IAATO is still considered with slight distrust, and it is doubted that IAATO will be capable of adequately addressing upcoming regulatory challenges singlehandedly. In this respect, the Treaty regime enjoys widespread recognition, acceptance and legitimacy as a robust, proven international institution, which is suited to assume the responsibility of regulating Antarctic tourism. It appears logical that within the Antarctic tourism regime, the strengths of the two main regulating bodies should cooperate or be combined to overcome system-inherent weaknesses.

Two of the major weaknesses of the current regime seem to rest with the seemingly uncoordinated, scattered, unfocused and incomprehensive approach to tourism regulation through the ATS and the sovereignty compromise (Stokke & Vidas 1996, pp. 433 & 452), which increases the disparity of interests between ATCPs and consequently makes it more difficult to reach consensus. In fact, Young (1994) attests that the effectiveness of resource regimes is sensitive to ownership or sovereignty aspects. A sense of ownership needs to be instilled within all parties through providing a forum for members of the regime to voice their concerns (Young 1994, pp. 73–74). Agrawal (2002) agrees by emphasising that robust and successful governance of common-pool resources is based to a considerable degree on the participation of resource users in decision-making and the provision of autonomy to resource users with respect to the development, implementation and enforcement of critical managerial mechanisms towards the management of the resource in question. This participation of stakeholders is only realised to a certain degree at the moment. Whereas IAATO is consulted and given observer rights at ATCMs, the industry association's input to decision-making is only indirect by taken advantage of the slow and cumbersome decision-making processes ATCPs have to undergo and by proactively implementing codes of conduct and other guidelines for Antarctica tour operators. These codes of conduct have been lauded as "a particularly effective form of self-regulation" (Mason 2005, p. 192), but it remains to be seen whether their effectiveness will withstand the pressures increasing numbers of visitors and operators place on the system. Indeed, self-regulation is said to be "only as effective as the extent to which compliance with regulation is sought" (Cooper & Hall 2008, p. 153). Although the behaviour of tour operators and their level of compliance with guidelines are said to be commendable, there is concern that this may change with more and larger operators moving into the market. The anticipated changes in the industry are, in fact, the point on which regime effectiveness hinges.

The rapid development of the Antarctic tourism sector results in a dynamic and ever-changing structure of the policy 'problem' the Antarctic tourism regime is meant to address, such that it cannot directly be concluded whether the regime successfully addresses the problem. So far, the behaviour of the tour operators, as argued above, is conscientious, cooperative and laudable, which implies that, despite a few weaknesses in the system in terms of enforcement and monitoring of ATS measures, the regime is successful in coordinating tour operator practice such that environmental impacts can be minimised or limited. However, this positive result largely originates from the fact that, (a) operator behaviour is commendable and self-policed, making enforcement and monitoring superfluous, and (b) the regime has not yet been tested extensively. As the discussion in this section has shown, there is now concern that a further increase in scale and diversification of Antarctic tourism activities would shatter the current equilibrium. The mere existence, not to mention prevalence, of this concern indicates that in its current form, the Antarctic tourism regime as a whole does not possess the regime attributes necessary to deal with future challenges. Prudently put, this implies that the Antarctic tourism regime cannot be considered as very effective because an effective regime would possess the capability, flexibility and confidence to respond to upcoming developments in an adequate and timely manner. It appears that the regime lacks foresightedness or a strategic vision, which has been confirmed by Enzenbacher (2007) who argues that the current *ad hoc* approach to regulating Antarctic tourism could not prevent the development of a gap between existing regulatory tools and the nature and scale of the tour operations they are meant to address (Enzenbacher 2007, p. 161).

There is the need for a comprehensive Antarctic tourism strategy that integrates self-regulation and regulation through the ATS to guarantee the success and effectiveness of the Antarctic tourism regime in times characterised by rapid changes in the structure and scale of the industry. A move towards a more comprehensive regulation of Antarctica would coincide with two distinctive trends within the ATS regime: the propensity to support a comprehensive regulation of human activities in the Antarctic and the affinity towards a precautionary approach to regulating human activities (Stokke & Vidas 1996, p. 447). Change is inevitable, and whilst there is no concern that the industry will adapt, there is hope that the ATCPs will respond as well, particularly as they have mechanisms at their hands⁸¹, which could provide for the success of the Antarctic tourism regime in the future.

7.2 The future of Antarctic tourism regulation

The resolution of tensions also turns us to the question of design. I hold that, like our compromiseable and transcendable conflicts, we also resolve our tensions through designs, principally moral, institutional and technological designs. So a theory of design becomes central to a theory of applied environmental ethics. (Hooker 1992, p. 163)

In line with the concluding statement of the previous section, Dredge & Jenkins (2007, p. 210) emphasise that good policy and planning processes should be embedded into a strategic vision, which integrates past and present knowledge of the issues at hand as well as potential future developments. Good policy processes should further be based on informed decision-making and characterised by flexibility, adaptiveness, responsiveness, accountability, transparency, equity, the promotion and acknowledgement of stakeholder participation, and the organisation of policy processes into a number of distinctive stages (Dredge & Jenkins 2007).

In the same vein, Dinuzzi (2006, p. 224) and Bastmeijer & Roura (2004, p. 778) urge for a strategic approach to Antarctic tourism regulation taking account of the precautionary principle. The latter has not been employed to the full extent (Bastmeijer & Roura 2003, p. 780) but might, for instance, help prevent tourists from visiting highly sensitive sites until proper management guidelines and decisions have been established (Bastmeijer & Roura 2004, p. 778). A strategic approach to tourism regulation could imply the design of scenarios for possible developments of Antarctic

⁸¹ Stokke & Vidas (1996, pp. 452–454) identify five mechanisms increasing the effectiveness of the ATS:

- A 'productive deadlock phobia' (Stokke & Vidas, 1996, p. 452) among the ATCPs which allows them to reach decisions in a consensus-based system despite diverging interests, particularly if sovereignty matters are involved. This deadlock phobia is partially rooted in external pressure forcing the ATCPs to be active and responsive and in the belief of the Parties that the ATS secures their interests better than an alternative regime.
- The capability of the ATCPs to 'decouple' (Stokke & Vidas, 1996, p. 453) sensitive, conflict-arising and problematic matters from those that are beneficial to all parties and encourage cooperation marks an elementary aspect of the Treaty regime, which not only reduces costs of interaction but also allows for progress being made in decision-making and for a cooperative spirit to prevail.
- The ATS has been able to quieten external criticism through the principle of 'cooptation' (Stokke & Vidas, 1996, p. 453) by offering benefits to regime supporters through, for instance, increasingly giving interested parties the status of observers during ATCMs or through integrating suggestions from external bodies such as environmental NGOs or IAATO.
- The 'elevation of science' (Stokke & Vidas, 1996, p. 454) facilitates cooperative decision-making and provides direction regarding resource use in Antarctica. Further, it establishes science as an authority granting considerable legitimate power to scientific exploration in Antarctica.
- The ATS possesses a large 'pool of acceptable solutions' (Stokke & Vidas, 1996, p. 454) for a variety of political processes and quandaries. When ATCPs are confronted with new situations, they are able to utilise this pool of solutions and base responses to new developments on established processes encouraging organisational learning.

tourism over the next ten years and the development of response mechanisms from there (Bastmeijer & Roura 2004, p. 778).

In light of the rapid growth and diversification Antarctic tourism experiences, moving from an *ad hoc* approach to regulating Antarctic tourism to a strategic one might be a challenging and daunting task. However, over the last few years, a wealth of studies looking into environmental, operational and political implications of Antarctic tourism and management parameters has been conducted. As Stonehouse & Crosbie (2007, p. 220) state,

[r]esearch on Antarctic tourism mirrors almost precisely the growth of the industry – slow to develop during the first three decades, accelerating during the 1990s, and since then burgeoning.

Nonetheless, more research into the realities of Antarctic tourism, its operational aspects, its potential cumulative environmental impacts, its global environmental footprint, and its management is needed to inform policy-making (Enzenbacher 2007, p. 188; Dingwall & Cessford 1996, p. 68). As a strategic approach to Antarctic tourism regulation relies on verified knowledge and information about the status quo of Antarctic tourism and expected future developments, ATCPs are called upon to recognise these needs and support respective research projects both, in principle and financially (Enzenbacher 2007).

This section outlines some suggestions with respect to the regulation of Antarctic tourism in the future integrating ideas expressed in the literature and those voiced by research participants. An overview is given of the ends and some means to regulating Antarctic tourism in the future, before shipping regulation, EIAs and the Protocol, the possibility of a separate Annex to the Protocol or a comprehensive tourism convention are looked at in greater detail.

7.2.1 The ends and means of a potential future regulation of Antarctic tourism

As indicated in Chapters 5 and 6 and reiterated in the previous section, the overall goal of any regulation of tourism (or human activities in general) in Antarctica should be the preservation of the Antarctic environment and its wilderness character as an end for its own sake⁸². In order to achieve this, more restrictive rules might be needed, such as a cap on the number of ships or tourists allowed to visit the continent or specific sites each year. Improvements of the current regulatory situation could further be achieved through independent observer schemes on tourist ships (see also Enzenbacher 2007), an accreditation scheme for Antarctica tour operators, a designated staff-training programme, a better regulation of vessels, a higher staff-to-tourist ratio during landings. An accreditation scheme, or licensing system for tour operators, is suggested throughout the literature (see, for instance, Molenaar 2005, p. 34; Bastmeijer & Roura 2004, p. 775; Hall 1992, p. 7 based on Nicholson 1986); Page & Dowling 2002, p. 236) as a potential advance towards a better regulation of Antarctic tourism. According to Landau & Spletstoesser (2007, pp. 202–203), IAATO is currently in the process of developing an accreditation scheme and also of working together with the HCA to improve navigational charts for Antarctic waters. Further, a stronger integration of and reliance on AS-

⁸² The recognition of wilderness protection in Antarctica being an 'end for its own sake' is rooted in the acknowledgement of its inherent non-instrumental ethical value. Non-instrumental values capture the "intrinsic" significance of an end for its own sake while instrumental values refer to the usefulness of something as a means towards an end and (Palmer 2003, p. 16; Rolston III, 1992, p. 144).

PAs and ASMAs for tourism regulation might be warranted or a restriction of the types of permissible activities, as much as it might be desirable to impose a limitation on the number of ships visiting Antarctica each season.

Indeed, in the Antarctic context, ASPAs could be a powerful tool for managing Antarctic tourism. Most protected areas around the world do not specifically exclude or prohibit human use of the area, but protected areas in the Antarctic eminently differ in this respect (Clark & Perry 1996, p. 312). Particularly, ASPAs largely exclude any human use of the area unless scientific activities are undertaken for which a special permit has been granted (Clark & Perry 1996, p. 312). ASPAs could be partially financed through imposing a tax or entrance fee on operators⁸³ for using a certain tourist site or through “allocating a share of the system’s operating costs to Treaty Parties based on the extent of each nation’s scientific activities” (Clark & Perry 1996, p. 317).

In one of her earlier papers, Enzenbacher (1992a) suggested that tour operators be supported and encouraged to self-police and self-regulate (Enzenbacher 1992a, p. 261) and that the Antarctic environment would be protected best by ensuring the following

- 1) consistent self-regulation by the tourism industry;
 - 2) better education of tourists and tourism personnel;
 - 3) improved communication, including standardized forms, reporting procedures and exchanges of information for all tourist activity;
 - 4) the uniform application of all legislation governing human activities in Antarctica; and
 - 5) continued research on the effect tourism has on the Antarctic environment
- (Enzenbacher 1992a, p. 265)

In later years, Enzenbacher (2007) seemed to modify these recommendations by stressing that the tourism industry should not be the main determining actor and that the ATCPs should embrace more comprehensive, coherent and stringent tourism policies. So far, ATCPs have been far too reliant on IAATO and the industry association has been steering policy-making to a great degree, which Enzenbacher (2007) considers to be inappropriate (Enzenbacher 2007, p. 156). This conclusion is backed by Dingwall & Cessford (1996), who admit that some degree of self-regulation is necessary for a successful and sustainable tourism development in the Antarctic, but that governments have to supervise and observe tour operators as well as supporting them and improving their communication and relationships with the tourism industry (Dingwall & Cessford 1996, p. 68). Similarly, Enzenbacher (1992a & 2007) and Hall (1992, p. 7) repeatedly emphasise that cooperation and effective communication between ATCPs and tour operators as well as amongst members of their own groups are central to successfully regulate tourism in Antarctica.

A successful regulation of Antarctic tourism seems to hinge on ‘growth control’ as much as on effective communication and enforcement. Tourism growth can be actively affected by regulatory measures that focus on environmental protection, taxation or industry regulation (Cooper & Hall 2008, p. 149). Specific mechanisms towards managing the growth of tourism are discussed by Gill (2004) and Page & Dowling (2002). Gill (2004, pp. 572–573) and Page &

⁸³ This would coincide with the notion that the costs for utilising environmental resources should be borne by the individual users such that users are increasingly required to take responsibility for their own actions (Arrow *et al.* 1995).

Dowling (2002, p. 230) suggest firstly, zoning or environmentally sensitive area maps as tools focusing on maintaining the quality of a destination⁸⁴ and secondly, preservation strategies like permits and growth limitation strategies such as fees, restricted access, caps on numbers or quota systems which concentrate on managing quantity aspects. Enzenbacher (2007, p. 166) advises that quota systems might randomly allocate a specific number of spaces to various tour operators who had registered for a season's draw. The allocation of spaces to tour operators could also be based on award points linked to various aspects of an operator's performance (Enzenbacher 2007, p. 166).

The aforementioned mechanisms prescribe a regulatory regime that is dominated by the ATCPs, a conclusion that has been supported by the research participants, the majority of whom favoured a strong and stable ATS to guide and legitimise tourism regulation. At the same time, the weaknesses of the ATS in terms of a lacking commitment to establish a comprehensive system of binding regulatory mechanisms, and resulting problems with regard to effective policing and sanctioning, were lamented. Yet, the research participants indicated that it might be illusionary to expect Antarctic tourism regulation through the ATCPs to be changed from a largely hortatory system into a binding one. However, international agreements generally seemed to enjoy a relatively high degree of compliance, and the focus of any Antarctic tourism regulation – no matter whether binding or not – should be on implementation and enforcement, which a self-regulatory system could significantly enhance. Nonetheless, the lack of legally binding regulations and the limited legal authority of the self-regulatory component as well as the ATS component of the Antarctic tourism regime were viewed with concern.

It appears that one option to improve matters of enforcement would be to grant greater authority to the self-regulating industry with the purpose of enabling tour operators “to feel a degree of “ownership” over Antarctic resources in order to assist their resolve to manage and protect them” (Hall 1992, p. 7). From a ‘good governance’ perspective, this approach is encouraged by Arjoon (2006, p. 53) who argues that instead of demanding mere rule-compliance, governance based on instilling ethical principles within an organisation's members and creating relationships of trust and integrity improves organisational performance and managerial effectiveness. This could be extrapolated out to the Antarctic tourism regime promoting compliance with the regulatory regime and encouraging operators to take leadership in advancing conduct and regulation, which may also benefit the respective operators by improving their reputation.

7.2.2 Shipping regulation

Hall (1992, p. 8) suggested controlling Antarctic shipping through a shipping convention and a ship's register in order to ensure that vessels cruising Antarctic waters meet specified safety and operational standards. In this respect, an Antarctic shipping code similar to the 2002 IMO ‘Guidelines for Ships Operating in Arctic Ice-covered Waters’⁸⁵ might provide some direction and guidance (ATCM 2007c; Johnson & Kriwoken 2007, p. 97; Joyner 2007). The main in-

⁸⁴ When discussing the issue of dispersal versus concentration of tourist impact, Prosser (1998) concludes that dispersal is not always the best choice from an environmental point of view. He argues that although for some forms of tourism, dispersal is essential, dispersed tourism is difficult to monitor and manage and suggests that high-density areas may be utilised in order to protect other highly sensitive environmental resources (Prosser, 1998, p. 391).

⁸⁵ Although this shipping code had included both polar regions at some stage, all references to the Antarctic were taken out in 1999 before these IMO guidelines were adopted in 2002 (Joyner 2007, p. 66).

tention of these IMO guidelines rests with the standardisation of vessels and vessel operation to enhance safety when sailing in ice-covered waters (Joyner 2007, p. 63). As such, the IMO Arctic guidelines address issues of vessel construction, equipment and operation and, for instance, describe basic requirements for structural features of vessels, the types of lifeboats and life rafts to be used, and for an experienced ice navigator to be on board (Joyner 2007). Despite their hortatory nature, Joyner (2007, pp. 61–62) believes that common sense would be a strong motivator resulting in extensive application of these guidelines. Common sense would be the primary reason for these guidelines to be developed and adopted for Antarctic waters as well (Joyner 2007, p. 62). In addition, the majority of the vessels visiting both polar regions would embrace the IMO Arctic Guidelines and hence ‘take them south’ (Joyner 2007, p. 62). Joyner (2007) argues that although the IMO guidelines are not legally binding, they are “likely to eventually into a de facto legally binding instrument” (Joyner 2007, p. 81) due to the status of the guidelines as well-researched, practicable, tested safety codes, which insurers will increasingly require operators to apply (Joyner 2007, p. 81). The more operators adopt the guidelines, the stronger an authority the guidelines will become, making them eventually into rules of customary law (Joyner 2007, p. 81). However, their strength also depends on governments convincing operators to comply with them (Joyner 2007, p. 82). The UK suggested that IMO Antarctic guidelines be developed and that it be considered at the ATCM to integrate ship class, construction and environmental conditions into the authorisation procedure Antarctica tour operators have to undergo according to Protocol provisions (ATCM 2007c).

In addition to shipping guidelines in support of the safety of vessels navigating in Antarctic waters, voices for stricter port-state jurisdiction and control were prominent among the research participants and in the literature (ASOC 2003a & 2006; Vicuña 2000, p. 68; Richardson 1999, pp. 15–16), which was not to suggest that flag-state jurisdiction should be eliminated (Vicuña 2000, p. 68). Port-state jurisdiction would give ATP ports, and particularly gateway ports in the Southern Hemisphere, more power to investigate vessels leaving for Antarctica (Vicuña 2000, p. 68) at a time when a large number of tourist vessels are flying flags of convenience (ASOC 2003a). A specific ‘Regional Memorandum of Understanding (MOU) for port-state jurisdiction in the Antarctic’⁸⁶ might facilitate a standardisation of procedures and approaches to inspection for vessels cruising in Antarctic waters (ASOC 2003a; Vicuña 2000, p. 68). Indeed, such a MOU might be necessary if port-state jurisdiction is to be effective and successful in the Antarctic context. Bertram *et al.* (2007b, p. 143) argue that whereas it would be desirable to obtain better leverage over vessels flagged by Third Parties by strengthening port state jurisdiction and control in gateway ports⁸⁷, care needs to be taken as not to upset the delicate political balance amongst ATPs. Five of the six gateway ports are part of claimant states, and there is the potential that some of these states would use port-state jurisdiction as a tool to strengthen their sovereignty claims (Bertram *et al.* 2007b, p. 143). As Richardson (1994, cited in Bertram *et al.* 2007b, p. 143) commented, there is the chance that different ports might treat ships differently opening avenues of dispute over biased inspections. This possibility cannot be discarded *per se*, and Bertram *et al.* (2007, p. 144) write:

⁸⁶ See ASOC (2003a) for a draft version of a possible Antarctic MOU.

⁸⁷ The six main gateway ports to Antarctica (Ushuaia, Argentina; Punta Arenas, Chile; Stanley, Falkland Islands; Cape Town, South Africa; Hobart, Australia; Christchurch/Lyttelton, New Zealand) “currently divide between them practically all the tourist trade into the southern oceanic area, with the first three unequivocally taking the lion’s share” (Bertram *et al.* 2007b, p. 124).

Unless there were complete agreement on standards between the port authorities, and rigorous maintenance of standards between them, those wishing to attract ships could be tempted to apply more lenient criteria – a consideration that might well apply to the three gateway ports in the South American sector.

If this were to happen, port-state jurisdiction would be rendered ineffective and the stability of the ATS, which is based on balanced power relationships with sovereignty issues put to rest by the Antarctic Treaty, would be threatened. While port-state jurisdiction is endorsed by the IMO as a widely used tool to improve the enforcement of crucial maritime conventions (ASOC 2003a), it needed to be established beyond any shred of doubt that

- (a) inspections were harmonised and standardised in all port states,
- (b) all ATPs were signatories to a MOU for port-state jurisdiction in the Antarctic before it came into force,
- (c) the MOU were binding to all signatories, and
- (d) all ATPs that would participate in port-state jurisdiction were adequately equipped and manned to provide the required levels of inspection.

Consequently, it would be advisable to conduct a feasibility study examining the operational capacity of ATPs to provide effective port-state control before any further steps are taken.

In light of these quandaries, it comes to question whether the Antarctic tourism regime should rather focus its energy on ensuring that existing mechanisms, which would enable tighter control of non-governmental vessels operating in Antarctic waters, are effectively enforced. The vast majority of these non-governmental vessels are currently either flagged to ATCPs or operated by companies or individuals based in ATCPs and consequently have to comply with Protocol provisions or other ATS measures (ATCM 2007c). ATCPs may appoint observers or carry out inspections in Antarctica and on ships embarking on or disembarking from an Antarctic voyage in order to ensure that the principles of the AT are maintained (ATCM 2007d). This monitoring and auditing function could be utilised more extensively.

At the XXX ATCM in New Delhi, the ATCPs, encouraged by working and information papers submitted by the USA (ATCM 2007d) and ASOC (ASOC 2007a), adopted Resolution 4, which recommends to ATCPs *inter alia* that ships carrying more than 500 passengers be discouraged from landing in Antarctica. Albeit sidestepping the issue of developing a binding measure to this extent, the ATCPs have made a considerable step towards the adoption of a more precautionary approach to tourism regulation. In addition, the management of ship traffic through the web-based IAATO ship scheduler, which has proven to be an effective tool coordinating landings of tourist vessels under consideration of site-specific guidelines in Antarctica (ATCM 2007c; Landau & Splettstoesser 2007), could be endorsed and supported by ATCPs (ATCM 2007c). In 2007, the UK suggested formalising IAATO's role in overseeing and maintaining 'traffic control' through the ship scheduler by adopting a Decision to this extent, such that a wide application would be guaranteed and that all passenger ships could be included in the ship scheduler.

7.2.3 EIAs and improvements to the Protocol

As argued in the previous section, EIAs are not considered sufficient to guard against potential cumulative impacts at frequently visited landing sites. Even though an operator may submit an IEE taking into account this operator's behaviour, length of stay and activities at a certain landing sites, neither the IEE nor the operator will be in any position to assess the operator's impact in relation to other impacts at the same site. Viewing this issue against the goal of 'sustaining' the wilderness character and integrity of Antarctic sites, lessons can be learnt from environmental ethics and sustainable resource use. Scherer (2003, p. 336) argues that the environment in which an individual's action takes place is as important in the discussion of sustainability⁸⁸ as the choice this individual has made about the action. Externalities matter, such as how many other individuals make the same choice, how many other choices that are made impact on the situation, or what the physical conditions are like (Scherer 2003, p. 336). These considerations are of direct relevance for Antarctic tourism, which has various individual tour operators making what they see as rational and sustainable choices, and it has to be asked what effect repeatedly making certain operational choices have in the Antarctic. How do we know that actions that could be justified as environmentally sound and sustainable would pass as such if they were repeated for the n^{th} time? A question like that does not exclusively apply to tourism in the Antarctic, but should also be asked in relation to other commercial or scientific activities.

Considerations such as the previous one instigated the request for strategic environmental assessments⁸⁹ (SEAs) to be added to the Protocol to compensate for the EIA's inability to take cumulative impacts into account (Dinuzzi 2006, p. 218; ASOC 2002b). SEAs would enable activities to be considered from the viewpoint of a strategic plan for a specific area or region and might thus determine which activities can take place in this area (Dinuzzi 2006, p. 218), fitting neatly into a strategic approach to regulating Antarctic tourism. SEAs should in no case substitute EIAs but rather complement them (ASOC 2002b & 2003c) by incorporating the consideration of environmental impacts in the initial stages of policy-making⁹⁰. SEAs would also allow the precautionary principle to be applied to Antarctica as suggested by Bastmeijer & Roura (2004). As already mentioned, two of the main gaps of the current EIA provisions in the Protocol are the lack of assessment of cumulative impacts and the disregard of uncertainties in decision-making (Bastmeijer & Roura 2004, pp. 770–774), both of which could be addressed by applying the precautionary principle linked to an SEA approach. According to Bastmeijer & Roura (2004, p. 773), further benefits of an adoption of the precautionary principle to Antarctic tourism regulation would lie in its capacity to allow for:

- EIAs to be further developed for and consequently more applicable to tourism;
- An improved appraisal of potential cumulative impacts in the EIA process prior to the respective activities taking place (rather than heavy reliance on ex-post monitoring);
- Limiting or completely banning tourist activities on specific, very vulnerable sites;

⁸⁸ Scherer (2003) is content to accept the concept of sustainability as the 'sustainability of resources', defining resources as all materials with an established use (Mather & Chapman, 1995).

⁸⁹ SEA is referred to as a "structured, proactive approach to strengthen the consideration of environmental issues in strategic decision-making" (ASOC 2002b:2).

⁹⁰ One of the major strengths of SEA represents the incorporation of the analysis of environmental impacts in the early stages of strategic decision-making related to policies, programmes and plans (Jiliberto 2002:61; Sheate, 1994:142).

- Limiting access to certain sites on a temporal or spatial basis under consideration of site-specific characteristics;
- Focusing on sustainably managing tourist activities in dedicated, specially designated sites where tourist activities are concentrated;
- Hindering access to new, previously unvisited, sites; and
- Banning certain types of tourist activities.

Hemmings & Roura (2003, p. 22) argue for the insurance of more rigorous compliance with EIA procedure and ask for additional mechanisms to be put in place to regulate Antarctic tourism as codes of conduct may regulate behaviour *in situ* and operational matters but hardly influence the location or timing of activities (Hemmings & Roura 2003, p. 20). Clearly, despite IAATO's good record regarding tourism regulation, an increasing scale of tourism to the Antarctic will require adequate management of landing sites (Bertram & Stonehouse 2007, p. 305). Bertram (2005, p. 257) and Lee (2005, p. 88) argue that the requirement for monitoring of activities in the AT area is currently disused because of the high costs involved, a lack of motivation to monitor and difficult logistical arrangements. To establish regular periodic reviews of the environmental status of certain sites under consideration of distinct site management objectives might be an effective tool to gain some information on environmental impacts and more control regarding monitoring methodologies (Bertram 2005, pp. 254–255). Nonetheless, monitoring at landing sites might not be the most important concern as reporting of incidents, damages, and negative impacts as well as inspection and potentially the temporary closure of sites are not only desirable but also feasible regulatory tools within the existing frameworks (Bertram & Stonehouse 2007, p. 305). Kriwoken & Rootes (2000, p. 147) suggest that tour operators make use of environmental auditing – despite it not being a requirement set forth by the Protocol – as environmental auditing would allow tour companies to keep track of their environmental performance, assess and identify any environmental impacts their operations might entail and discuss opportunities to improve their performance.

Moreover, as indicated in the previous section, the ambiguity of the terminology used in the Protocol, the lack of instruction on the EIA process and the inconsistencies in domestic implementation are the source of confusion. No EIA will be effective unless the values and principles on which the EIA process is based can be thoroughly defined (Benson 2003, p. 265). The apparent inconsistencies, ambiguity and vagueness within the Protocol itself and particularly within the EIA process, which seem to be borne out of the extraordinarily high degree of politicization along with the necessary concessions compromising the effectiveness of EIAs, will have to be addressed if Protocol provisions are to represent effective gatekeepers to Antarctica.

7.2.4 A separate Protocol Annex on tourism?

In order to properly address tourism and relieve the burden off EIAs as the sole gatekeeper to Antarctica for tour operators, a separate annex on tourism was proposed by various countries during the XVI and XVII ATCM in 1991 and 1992 (Bertram 2005, p. 49; Bastmeijer & Roura 2004, p. 774; ASOC 2002a). However, no consensus was reached and the proposal was dropped from discussion at the XVIII ATCM in Kyoto when Recommendation XVIII-1 was adopted to substitute for the tourism Annex (Bertram 2005, p. 49).

The adoption of Annex V (Area Protection and Management) and Annex VI (Liability Arising from Environmental Emergencies) have shown that the Protocol entails the capacity to add new instruments to the existing framework illustrating the system's flexibility and ability to react to new developments or changing circumstances. Of the adoption of Annex V to the Protocol, Vicuña (1994, p. 7) claims that it

has led to a reorganized, simplified and strengthened system of Antarctic protected areas, thus reaching a new stage in the evolution which has been experienced under the Antarctic Treaty and specialized conventions. ... The adoption of Annex V has also evidenced the advantages and flexibility of developing international environmental law by means of annexes or other such instruments attached to broadly conceived framework conventions. Tourism is also a subject which will probably follow this path.

Redgwell (1994) argued accordingly that, although the Protocol clearly applies to all activities within Antarctica, it is too general. Therefore, a separate Annex on tourism may be warranted as the current developments and growth of Antarctic tourism might necessitate more stringent regulation (Redgwell 1994, p. 629). Moreover, it appears to be easier and more feasible to use an existing framework and amend it rather than development a completely new system of rules and procedures addressing Antarctic tourism, which might be highly repetitive (Vicuña 1994, p. 4).

Enzenbacher (1992a) consolidated views in favour of and opposing the adoption of a separate Protocol Annex on tourism as presented in Table 7.2.1.

Table 7.2.1: A summary of views regarding the adoption of a separate annex on tourism

Views in defence of a Protocol Annex on Tourism	Views opposing a Protocol Annex on Tourism
Some activities unique to tourist activity have not yet been addressed within the Antarctic Treaty System. A Protocol Annex on Tourism provides an opportunity to adopt a comprehensive set of regulations for tourism conducted in the Treaty Area.	The Protocol on Environmental Protection to the Antarctic Treaty already covers all human activity in the Antarctic Treaty Area and renders and Annex on Tourism redundant.
A Protocol Annex on Tourism provides means of addressing tourism issues in a consistent, coherent and legally binding manner.	Means already exist within the Antarctic Treaty System (including the Protocol itself) to address tourism issues.
If all the regulations applicable to tour operators and private expeditioners were placed in a Protocol Annex on Tourism the information could be more readily understood by and disseminated among those bound by its provisions.	A two-tiered system of rules or regulations is not appropriate for the Antarctic. State operators should be held to the same operational and behavioural standards as commercial tour operators/visitors or privately funded expeditioners.
Current provisions covering Antarctic tourism are not specific enough and may be exploited by commercial tour operators or private expeditioners.	A Protocol Annex, as a legal instrument, would be more difficult to amend once it entered into force, than Treaty Recommendations.
It is better to err on the side of caution and regulate tourism in a Protocol Annex before irreversible environmental damage is caused. Regulations can be relaxed if proven to be too stringent.	Over-regulation of the commercial tourism industry might force operators to work outside of the Treaty System.
An Annex on Tourism would allow all member states of the Protocol to be involved in regulating tourism activity.	

Source: Enzenbacher (1992a, p. 261)

A separate Protocol Annex on tourism has found support by ASOC (2002a & 2006) but has not been seriously discussed by ATCPs after the proposal had been dropped from the agenda in 1994 (Bertram 2005). Whereas it might be desirable to formulise tourism regulation in a separate Annex and making it more coherent, consistent and comprehensive, there is the possibility of contradicting the purposes of the Protocol, which explicitly addresses the regulation of all human activities in Antarctica.

7.2.5 A separate tourism convention?

The call for the development of an international convention on Antarctic tourism goes beyond the addition of a separate Annex to the Protocol. It requests the formulation and legitimisation of Antarctic tourism regulation through an official, comprehensive, multilateral agreement, most likely nested within the Treaty regime, but with the potential of existing outside and, if need be, outliving the ATS. As such, a tourism convention could provide the necessary regulation without compromising domestic policies of ATCPs and potential conflicts as regards the application of domestic law to nationals of other countries (Hall 1992, p. 7).

Such a CRATA (Convention for the Regulation of Antarctic Tourist Activities) found support by various academics and environmental groups (Dinuzzi 2006; ASOC 2002a & 2006; Scott 2001, p. 968) and could be developed to complement current provisions of the ATS on tourism in a comprehensive way (Enzenbacher 2007, p. 165; Dinuzzi 2006, p. 222; ATME 2004). Nonetheless, considering the existence of a variety of regulatory mechanisms under the Antarctic tourism regime, there are concerns that the adoption of a separate tourism convention might be repetitive and a bureaucratic challenge. Bertram (2005, p. 260), for instance, argues that there is no need for an additional level of bureaucracy in form of a separate convention on Antarctic tourism and that ATCPs should instead properly commit to effective site protection and management. Bertram (2005, p. 260) states,

General concern remains focussed on the degradation of sites visited by tourists, rather than whether tourism management has a cohesive framework. Even if a tourism convention existed, the only active management option available, if a site showed signs of degradation, is placing the site off limits for a period of time. This would require the ATS to commit to site protection through a simple monitoring strategy...

Indeed, whereas a tourism convention might be the most comprehensive and coherent instrument for the regulation of Antarctic tourism, it would be time-consuming and costly to develop one. In consideration of the wide, albeit mostly hortatory, scattered and incomprehensive, array of existing regulatory mechanisms addressing tourism issues, it might be inefficient to focus energies on the development of a tourism convention. Some of the existing tourism regulatory mechanisms have not even been applied to their full extent, for instance, the rights for inspection and designation of observers under Article VII of the AT, or the extensive utilisation of ASPAs and ASMAs for the purpose of regulating tourism. Another argument against a separate tourism convention might be that in the time it would take to develop one, Antarctic tourism will have changed its face and developed into a mature industry with different characteristics.

7.3 Concluding thoughts

Much remains to be explored and examined. As the industry continues to grow and diversify, so will opportunities for continuing research into an interdisciplinary field involving aspects of environmental sciences, international relations and law, industrial development, management and human behaviour. (Stonehouse & Crosbie 2007, p. 220)

As the discussions above have shown, a tourism convention might not be the most feasible approach to address issues related to the burgeoning Antarctic tourism sector. Similarly, a Protocol Annex on tourism might be impractical as it erodes the foundation of the Protocol which aims at regulating all human activities in the AT area. The unfeasibility and undesirability of designing either a tourism convention or a Protocol Annex coupled with the necessity of embracing a strategic approach suited to regulate Antarctic tourism in such a way that serious adverse impacts are avoided, now and in the future, requires the reconsideration of existing regulatory procedures and means. As argued in this Chapter, the ATS as such is generally a successful and effective regime that could firstly withstand challenges and criticism, and secondly gain transparency and recognition over time. Similarly, as a result of maintaining a proactive approach towards regulating tour operators and ensuring commendable practice of their members in Antarctica, IAATO gained acceptance over time.

Consequently, the Antarctic tourism regime would benefit from well-established cooperation, communication and transparency between IAATO and ATCPs. Furthermore, terms of engagement and cooperation would have to be clearly outlined, and IAATO should be granted greater authority in matters the association is better equipped and suited to deal with, for instance the coordination of tourist ship traffic in the Antarctic Peninsula. To give IAATO teeth, the Treaty Parties would have to offer active support by, for example, only permitting IAATO members to visit stations in Antarctica. That way, companies operating outside IAATO would be at a disadvantage and would be encouraged to join IAATO, which at the same time, would strengthen IAATO's sanctioning power. Being put on probation or having one's membership status revoked would then have negative consequences for a company's itinerary or planned tourism activities in Antarctica.

The ATCPs should jointly position themselves with regard to the goals of their Antarctic tourism policy. A strategic vision could be developed and ideally formulated as a *Decision*. Then, in coherence with this strategic vision, long-term regulatory mechanisms could be planned and negotiated. In lieu of developing a tourism convention or a separate Annex on tourism, ASOC (2002a; 2006; 2007b) repeatedly suggested the formulation of general obligations and provisions on Antarctic tourism in a *Measure*, which is an established legally binding instrument ATCPs have at their disposal. The *Agreed Measures for the Conservation of Antarctic Flora and Fauna* serve as a successful example of an instrument, which established important cornerstones for environmental conservation in Antarctica and introduced the concept of special area protection and management through ASPAs and ASMAs (ASOC 2002a). Once a strategic vision and plans for Antarctic tourism regulation through the ATCPs are agreed upon, these could be operationalised in such a *Measure* or a series of *Measures*, leaving room for development of further mechanisms and complementing existing mechanisms whilst providing a tool for implementing instruments that can surpass the Protocol provisions (ASOC 2002a & 2006).

CHAPTER 8



8 Conclusion

Allowing people to visit Antarctica encourages a public interest in polar conservation. I have always found Antarctica a very interesting and moving place, and I now wouldn't dream of trying to prevent other people from sharing that experiences, just so long as it can be done in a controlled manner. (Stonehouse as cited in Nicholls 2007, p. 48)

This thesis research set out to investigate the effectiveness of the existing regulatory framework for Antarctic tourism from a regime-theoretical viewpoint and to discuss options for the potential regulation of Antarctica in the future. It adopted a qualitative research methodology nestled in a multi-paradigmatic framework, which was found best suited to accommodate the multi-disciplinary research context, the belief system of the researcher and the diversity of Antarctic tourism stakeholders. Once again reflecting on the research process, the author can now confidently state that despite the difficulties inherent in any study embracing a multi-paradigmatic approach, this thesis research would not have reached the same conclusions if she had embarked on a mono-paradigmatic journey. During a PhD research project, which normally requires a 3-4 year commitment, the character of or attitudes to the topic researched as well as the convictions and emotional involvement of the researcher may change. Further, upon gaining greater insight into the topic and interacting with stakeholders, the fundamental beliefs of the researcher may transform. Such a transformation, which is supported by the innate adaptability and inductive nature of many qualitative inquiry methods, would be hampered by settling for a single paradigm only from the outset of the research. As described in the Foreword and Chapter 2, this thesis research undoubtedly had the author embark on not only a physical but also an introspective psychological journey, during which she gained greater understanding of firstly, the complexities and intricacies of Antarctic tourism and secondly, alternative worldviews. Any qualitative research undertaken over several years and exposed to enthusiastic, outspoken stakeholders with firm but diverse beliefs in as emotive, complex and debated a field as Antarctic tourism, could potentially benefit from adopting a multi-paradigmatic approach. The author strongly encourages qualitative researchers to embrace the same open-mindedness qualitative inquiries presuppose when it comes to positioning their research within certain paradigms and adopt a multi-paradigmatic approach if they feel unease with making a single paradigm fit their belief system and research. Especially researchers who work in the multi-disciplinary, multi-faceted and highly complex tourism field, should at least tolerate, if not invite and acknowledge, a multi-paradigmatic approach.

Similarly, this thesis research advocates the wider application of the Delphi study in tourism research. As Chapter 2 has shown, despite a few promising studies employing a Delphi, it is not yet widely used in tourism research. However, the adaptive character and low-cost administration of a Delphi study would suit many research purposes and approaches. Particularly when active, enthusiastic and supportive stakeholders are available – such as in the Antarctic tourism sector – a Delphi might shed light on controversial and sensitive issues which otherwise would not be disclosed. Unrestrained by political sensitivities due to its anonymity, a Delphi can bring an informed debate by experts, for instance on an intricate political topic, to the knowledge of a researcher, who can influence and facilitate the discussion.

Overall, the qualitative methods of inquiry chosen are considered well-suited to investigate the dynamic and complex Antarctic tourism phenomena, which are greatly influenced by committed individual stakeholders, often with strong convictions. Personal contact with these stakeholders seems a prerequisite for obtaining a wealth of rich and in-depth information in the form of stakeholder perspectives on various aspects of Antarctic tourism regulation. The research participants were knowledgeable as well as forthcoming and supportive. These facts alone invite qualitative research on Antarctic tourism, not to mention the recognised need for the consideration of stakeholder viewpoints in policy-making or further research. Qualitative data on stakeholder viewpoints have been scarce so far, and this is where the main contribution of this thesis research lies.

8.1 Limitations and future research needs

One never notices what has been done; one can only see what remains to be done. (Curie n.d.)

The data presented throughout the chapters of this thesis, commence filling a gap of knowledge and, at the same time, uncover further gaps in research by revealing controversies and operational intricacies, which have not been sufficiently examined so far. Examples include the controversy of inducing operator compliance by peer pressure, which appears to be effective at the moment, versus top-down binding regulatory mechanisms. The social psychology and effectiveness of 'soft' or informal regulation in the Antarctic tourism context needs exploring. Further, the interesting controversy of port-state versus flag-state jurisdiction in view of the frozen, yet eminent, sovereignty situation in Antarctica warrants further attention. As the largest part of Antarctic tourism is ship-based, and in view of a series of recent mishaps and shipping incidents such as the sinking of the *M/S Explorer* in Bransfield Strait, the collision with a glacier of the *M/S Fram* near Brown Bluff or the grounding of the *M/S Nordkapp* at Deception Island, it would be desirable to dedicate research efforts to the investigation of safety mechanisms and regulations in shipping as well as to the comparability of inspection regimes in various flag states.

To the knowledge of the author, this was the first research using regime theory to assist in the analysis and discussion of stakeholder viewpoints on Antarctic tourism. As such, the application of regime theory was limited to considerations of a subset of dimensions defining regime effectiveness, with the focus of attention being the current behaviour of actors and specific regime attributes, and in particular procedural issues. As acknowledged in Chapter 4, this limited focus can be regarded as a disadvantage. However, adapting such a focus when assessing the overall effectiveness of the Antarctic tourism regime, offers substantial insight. Furthermore, such a 'limited' focus may also present opportunities for future research projects and a generally greater application of regime theory in Antarctic tourism research, particularly as the analytical framework presented by regime theory proved to be a flexible and adaptive critical tool, which could be employed to Antarctic tourism without great difficulties.

This thesis research shows that regime theory is a flexible tool applicable to a wide range of regimes with different regime attributes. So far, the application of regime theory in conjunction with qualitative research has been an exception and stakeholder perspectives have rarely been taken into consideration. The results obtained when employing regime theory to analyse qualitative data gathered from Antarctic tourism advocate a wider application of regime theory to the Antarctic tourism context. Future research initiatives are encouraged to consider aspects of the dy-

namic problem structure of the Antarctic tourism regime from the viewpoint of a range of plausible scenarios on the future development of Antarctic tourism. As this thesis represents a pioneering application of regime theory to Antarctic tourism stakeholder perspectives, more research into the configuration of the regime attributes is warranted. Finally, social practices and institutional linkages within the Antarctic tourism regime merit a thorough investigation.

The stakeholders that actively participated in this thesis research originated mostly from Western nations in the Northern hemisphere with a few exceptions extending to participants from the Australasian and Eastern European regions. Considering the involvement of South American countries in Antarctic politics and tourism and their presence on the Antarctic Peninsula, it might have been beneficial to include stakeholders from these countries in the thesis research. Logistical and financial constraints as well as the lack of opportunities to establish contact with South American stakeholders prevented the incorporation of personal accounts of the latter. Instead, the South American perspective had to be rebuilt from the picture painted in the literature, ATCM documents or conversations with other stakeholders. This is one limitation of this thesis research, which could be addressed in future research projects.

As indicated throughout the thesis, other areas that deserve the attention of researchers are the motivation and expectation of tourists visiting Antarctica, the attitudes of other Antarctic stakeholders with respect to tourists, and the long-term environmental, socio-cultural and political impacts of Antarctic tourism, and human activities in Antarctica in general. Especially wide-ranging long-term studies of the impacts of human activities in Antarctica will firstly allow benchmarks to be set for and applied to regulatory mechanisms, and secondly inform and support political decision-making.

8.2 Summary of the key findings

The regulation of Antarctic tourism is more than an environmental issue. It is multifaceted, with dimensions that implicated financial liability, search and rescue, and complex political matters concerning, among others, the use of Antarctic territory subject to unresolved sovereignty claims and the intrusion of influential economic interests into the Antarctic Treaty System. (Bastmeijer & Roura 2004, p. 778)

As the discussions in this thesis research show, the Antarctic tourism regime addresses the current demands for tourism regulation reasonably successfully. This is largely due to the commendable behaviour and cooperative spirit of tour operators and the complementary nature of the two main regime components – regulation through ATCPs and self-regulation. The Antarctic tourism regime overall is characterised by an inconsistent and piecemeal approach to regulating Antarctic tourism, which makes use of a vast array of scattered regulatory mechanisms with a mainly hortatory nature. This wide range of adopted mechanisms is evidence of the regime's flexibility and capacity to react to new developments as much as it exemplifies an *ad hoc* approach to tourism regulation which lacks strategic planning. Nonetheless, adverse impacts of tourism have so far been reportedly negligible, although care needs to be taken with regard to a final judgement in this respect because baseline and comparative data illustrating cumulative environmental impacts on frequently visited landing sites are lacking.

Both regime components have their strengths and weaknesses. The ATS is widely accepted and recognised as a stable and suitable institution for the regulation of all human activities in Antarctica. However, in their approach to regulating Antarctic tourism, the ATCPs are hampered by diverging interests and the unresolved sovereignty situation. Concerned about tourism development and, as the qualitative research has shown, eager and committed to regulate tourism, their power to adopt binding measures in a timely fashion is restrained due to the consensus rule in combination with their diverging interests. The result is a lack of responsiveness and flexibility as well as weaknesses in enforcement due to the disparate domestic implementation of regulatory instruments, national 'self-policing' and the lack of uniform, centralised policing and sanctioning. The latter, in turn, is negatively emphasised because of the largely hortatory character of Antarctic tourism regulation.

Industry self-regulation through IAATO possesses great flexibility and responsiveness as well as the capacity to quickly develop and implement new regulatory mechanisms. So far, peer pressure is an essential method of ensuring compliance with IAATO guidelines and bylaws, even though they are similar to Treaty mechanisms in that they exhibit a mainly hortatory character. Nonetheless, as an industry association, self-regulation through IAATO is viewed with some distrust and anxiety. The feeling dominates that self-regulation has to be backed by governmental regulation as otherwise self-interest could become the driving force steering the development of regulatory mechanisms.

For the above reasons, it appears to be sensible to combine the strengths of both regime components in order to overcome in-built weaknesses of the system and form a harmonised regulatory regime for Antarctic tourism. To a certain degree, this is currently done by opening avenues of communication and encouraging cooperation between tour operators and ATCPs. The Antarctic tourism regime has, over the years, gained transparency and maturity. IAATO is invited as an observer to ATCMs and has input into the discussion of regulatory mechanisms. IAATO's proactiveness was recognised by ATCPs, who have been reluctant to take tourism regulation solidly in their hands and develop coercive regulatory mechanisms. In fact, so far, ATCPs have been largely reliant on IAATO to self-regulate Antarctic tour operators and assume responsibility for proactively engaging in the design of codes of conduct. Nonetheless, some operators expressed the view that their input into tourism regulation was not valued by the ATCPs and that their participation in decision-making by ATCPs is very limited. This criticism notwithstanding, the regime has been successful in coordinating the *in situ* behaviour and practice of operators in accordance with the implied goal of maintaining the wilderness character and integrity of the Antarctic environment.

On the other hand, Antarctic tourism is a complex and highly changeable phenomenon, which is currently undergoing a rapid development involving growth in the numbers of visitors and operators as well as diversification. Stakeholders are concerned that the nature of Antarctic tourism is changing in a way that is incompatible with their visions of Antarctica's future. The potential erection of permanent land-based facilities solely for the purpose of tourism, an uncontrolled growth in numbers and the detrimental effect of large vessels conducting landings in Antarctica, as well as associated safety risks, received particular attention as undesired, but likely, developments. The fear that the Antarctic tourism regime in its current form is not suited to address these concerns adequately is evidence of the regime's perceived lack of robustness, flexibility and regulatory capacity. This research therefore concludes that the

current Antarctic tourism regime is not effective from a long-term perspective. The regime is in need of a strategic vision to replace an *ad hoc* approach to tourism regulation.

8.3 Practical recommendations for policy-making

Tourism now constitutes the single largest human activity in the polar regions. For anyone seriously interested in the well-being of those regions, the mere acknowledgement of that fact is not sufficient. Rather, a comprehensive look at the role of polar tourism, and the context within which it operates warrants thoughtful attention. (Snyder & Stonehouse 2007b, pp. 13–14)

In order to derive an appropriate strategy for the future regulation of Antarctic tourism, ATCPs – as the ones that inevitably determine the make-up of and division of power in the Antarctic tourism regime – would, first and foremost, have to agree on common goals. If tour operators are to be encouraged to continue environmentally conscientious and commendable operations, a sense of ‘ownership’ will have to be instigated in tour operators by considering their input in the goal-formation process. These goals should ideally be laid down in a *Decision* describing what the boundaries of Antarctic tourism development ought to be. In order to develop appropriate regulatory strategies, research into the operational aspects, potential cumulative environmental impacts, and the global environmental footprint of Antarctic tourism needs to be encouraged, conducted and consulted as suggested by, for instance, Enzenbacher (2007), Stonehouse & Crosbie (2007) or Stewart *et al.* (2005). Furthermore, tourism statistics and IEEs, which are compiled by national governments for operations of their citizens, need to be collated and made centrally accessible in such a way that operator activities and visitation data independent from IAATO’s statistics are available and can be used to assess and plan regulatory measures.

The realisation of a strategic approach to Antarctic tourism regulation should be based on a cooperative approach between ATCPs and IAATO. The ATCPs could formalise, legitimise and endorse this cooperation by clearly authorising IAATO to assume the responsibility for and, importantly, power over certain aspects of *in situ* regulation and coordination of Antarctic tour operations. Examples could include the scheduling and coordination of ships through the web-based ship scheduler, the development of further codes of conduct, and continued participation in the design of site-specific guidelines. Further, ATCPs could acknowledge IAATO’s efforts by restricting station visits to IAATO members. An official endorsement and authorisation of IAATO in this respect will be important if more teeth are to be allowed to the industry association and if non-IAATO operators are to be encouraged to join the association and abide by IAATO’s rules. These actions would also give IAATO more sanctioning power as it would become less desirable for companies to operate outside IAATO.

At the same time, IAATO might be required to undergo some changes to deal with the challenges that lie ahead and to maintain credibility as an ‘environmental stewardship organisation’ as has been claimed by research participants. IAATO would need to prove that standards are maintained and that operators who have been IAATO members for some time still run ‘as tight a ship’ as they had when they joined IAATO and had an observer partake in their expedition. Consequently, it might be advisable to implement a continuous independent observer scheme for all members, a feature that could be integrated into a well-designed accreditation scheme. Furthermore, as the Antarctic tourism sector grows and as more tour operators join the industry association, the necessity for restructuring arises. The

recent resignation of IAATO's long-serving executive director and the currently ongoing selection and approval process of a successor alludes to the onset of a metamorphosis IAATO seems to face. Indeed, these and other issues might make the 19th IAATO AGM in April 2008 in Uruguay into a watershed that defines how self-regulation will be shaped in the future.

The ATCPs could facilitate a strategic approach to tourism regulation through the adoption of a comprehensive *Measure* that addresses the key points of tourism regulation in a consistent and binding manner. Such a *Measure* could be designed to replace some of the existing recommendations, resolutions, decisions and measures on Antarctic tourism and as such result in greater clarity and 'user-friendliness' of tourism regulation. It appears elusive to aim at achieving a fully consistent and standardised implementation and enforcement of tourism regulation as national differences are likely to persist. Nonetheless, domestic implementation and enforcement could be aided and harmonised by designing distinct and clearly outlined processes to follow, for instance, for EIAs and authorisation procedures, and by clarifying currently ambiguous terminology in existing regulatory instruments, most predominantly in the Protocol. The means for these improvements are there. What is needed is political will, commitment, initiative and a cooperative approach that ensures consultation with all involved stakeholders and external experts.

GLOSSARY



Antarctica: In a geophysical sense, the *Antarctic* or *Antarctic regions* relate to all continental, archipelagic and marine areas south of the Antarctic convergence, a circular zone around the Antarctic continent where warm subtropical waters meet cold polar waters (Encyclopaedia Britannica 2003b, p. 788). In a legal and geopolitical sense, the Antarctic Treaty defines the Antarctic Treaty Area as the area south of 60° S Lat. Unless otherwise indicated, the legal and geopolitical definition is used in this research project as it is of relevance to the majority of Antarctic tourism regulation currently in place. As a matter of convenience, the thesis uses the terms *Antarctica*, *the Antarctic*, and the *Antarctic continent* interchangeably, unless there is a specific reference to Antarctic maritime areas only.

Antarctic tourism: There seems to be general agreement in the literature that Antarctic tourists are those visiting Antarctica who are not part of a national programme (Stewart *et al.* 2006; Bauer 2001; Enzenbacher 1992b). This thesis adopts a similar approach and builds on a narrower version of Hall's (1992) definition of Antarctic tourism as "all existing human activities other than those directly involved in scientific research and the normal operations of government bases" (Hall 1992, p. 4). Whereas Hall's (1992) definition includes recreational activities of national programme staff, these shall be excluded here as the focus of this thesis is on the regulation of commercial tourism activities. Moreover, other human activities that do not mainly serve recreational purposes are disregarded as well.

Antarctic tourism stakeholders: The term Antarctic tourism stakeholders comprises all individuals and institutions that have a stake or interest in Antarctic tourism – be it from

- an operational point of view (how is Antarctic tourism conducted?),
- a regulatory or political point of view (what kind of politics and regulations determine how Antarctic tourism is to be conducted?),
- a conservationist viewpoint (how can Antarctica be best protected and conserved for future generations or for its own sake?), or
- a personal-interest point of view (how should Antarctica be used?).

Antarctic Treaty System (ATS): The *Handbook of the Antarctic Treaty System* defines the ATS as "the whole complex of arrangements made for the purpose of regulating relations among states in the Antarctic" (Heap 1990, p. xii) with the 1959 Antarctic Treaty representing the centrepiece of the ATS. Binding its member states for an indefinite period, the Antarctic Treaty has been unprecedented in its dedication to reserve a whole continent for peace and science (Encyclopaedia Britannica 2003a, p. 439; Encyclopaedia Britannica 2003b, p. 803). It is important to note that the Antarctic Treaty cannot be considered as an imposed contract, but rather has to be seen as a negotiated agreement (Elliot 1994, pp. 33–34; Elliot 1992, p. 78; Wolf 1991, pp. 274–281; Peterson 1988, p. 85).

Common pool resources: This thesis adopts Buck's (1998) definition of common pool resources as "subtractable resources managed under a property regime in which a legally defined user pool cannot be efficiently excluded from the resource domain" (Buck 1998, p. 5). In contrast to Buck (1998) who describes Antarctica as a common pool re-

source, Vogler (1995) refers to the Antarctic as a common property resource which is regulated by a group of states (ATCPs) and hence, in a way made not only an excludable but also a rival resource (Vogler 1995, p. 6).⁹¹

Commons: The term *commons* is usually used to describe a wide range of resources or property, which are shared or can be accessed jointly by a group of stakeholders (Ostrom 2005, p. 18). Antarctica technically has to be regarded as an international commons, representing a resource domain that is shared by certain designated nations (with agreed upon terms of use) to the exclusion of other nations (Buck 1998, p. 6). As regards the Antarctic, not all nations are members to the Antarctic Treaty, which would be required to make the continent an international commons. However, it cannot be denied that Antarctica has some characteristics of a global commons⁹² due to some UN environmental treaties on Antarctica and due to the lack of any patterns of regional logic (Buck 1998, p. 6).

Effectiveness: Effectiveness describes “the quality of being effective” (Oxford English Dictionary 2004, Vol. V, p. 80), with *effective* referring to something that produces an event or a condition, executes a function, or accomplishes a result (Oxford English Dictionary 2004, Vol. V, p. 80). Hence, effectiveness has to be measured against a prescribed performance standard characterising a desired outcome or result. All actions or processes undertaken with the objective to achieve the desired outcome that reach this standard can be considered effective.

Flags of convenience: Martin & Law (2003) concisely define a flag of convenience as “[t]he national flag of a state flown by a ship that is registered in that state but is owned by a national of another state” usually as the result of financial advantages offered by the port state whose flag is flown (Martin & Law 2003, p. 205). Thus, flags of convenience, also referred to as ‘open registries’, provide alternatives to ship owners regarding to the registration of their vessels and may give them a competitive advantage (Pamborides 1999). According to Farthing & Brownrigg (1997, p. 191), because of the concern that open registries would result in a reduction in shipping and safety standards, there were efforts to give greater authority to port states over vessels calling in to their ports (e.g. through the Paris Memorandum of Understanding).

Flag-state jurisdiction and control: The term flag-state jurisdiction describes the rule that whilst navigating on the high seas, a vessel is only subjected to the jurisdiction of the flag the respective vessel is flying, i.e. that of the state that has given a ship the permission to use its flag (Martin & Law 2003, p. 206). Ships assume the nationality of the flag state, which exercises effective jurisdictional and legislative control over a vessel (Pamborides 1999; Farthing & Brownrigg 1997, p. 185). Flag states are required to ensure that vessels flying their flags comply with international shipping rules and standards, are in possession of the necessary certificates and are in the condition to operate safely in the waters they are scheduled to navigate (Farthing & Brownrigg 1997, p. 186).

⁹¹ In her notes, Buck (1998:16) explains that she considers the term “common pool resources” to be more precise and analytically significant than the term “common property resources” although the latter is commonly used in the literature as well. However, as the notion of property refers to a collection of rights, not just one, the term “common property resources” seems to lack “analytic significance” (Buck, 1998:16). As the term “common pool resources” is merely descriptive, on the other hand, “denoting subtractable resources that are available to an identifiable group of users under an unspecified property regime” (Buck, 1998:16) it should be preferred.

⁹² Global commons can be regarded as resource domains, which every country in the world is legally permitted access to. An example would be outer space (Buck, 1998, p. 6).

Management: In the literal sense, management refers to administrative acts or proceedings which are aimed at manipulating, using, or controlling humans or things (Oxford English Dictionary 2004, Vol. IX, p. 293). For the purpose of this research project, the term management shall specifically denote act(ion)s undertaken to influence the behaviour of humans in order to attain certain management objectives. Thus, tourism management entails all active endeavours to ensure that tourists, tour operators and other affiliated stakeholders comply with procedures prescribed to achieve said management objectives.

Port-state jurisdiction and control: Port-state jurisdiction represents “the competence of the port state to legislate and/or seek to enforce this jurisdiction over vessels visiting its port” (Pamborides 1999, p. 47). Port-state control is one of the various dimensions of port-state jurisdiction, and it enables the port state to exercise control over issues relating to marine safety, marine pollution, crew qualification and working conditions, although flag states maintain their legislative and enforcement jurisdiction even while vessels are in foreign ports (Pamborides 1999). As many vessels do not call in to a port of their flag state for quite some time, effective control and enforcement of flag-state legislation are very difficult, and port states were thought to have the potential to act as ‘agents’ for flag states in this case (Pamborides 1999). A dual system of port-state and flag-state control and enforcement has been introduced by MARPOL 73/78 (Pamborides 1999).

Property rights: Buck (1998, p. 3) aptly described property rights as a set of rights associated with the access to and use of certain designated resources by individuals, or groups of individuals (e.g. organisations, communities, companies, nation states). As such, they include the right to exclude others from the use of the resource and to transfer and inherit the property rights to others. However, the composition of this ‘set of rights’ varies from case to case – e.g. member states of the ATS may establish their research stations on the Antarctic continent but “they cannot transfer their access rights to non-member states” (Buck 1998, p. 3).

Regime: According to the Oxford English Dictionary (2004, Vol. 13, p. 508), the term regime refers to “a manner, method, or system of rule or government; [or respectively to] a system or institution having widespread influence or prevalence.” A more specific definition in the sense of institutional economics and law and policy is provided by Osherenko & Young (1993), who describe regimes as “social institutions composed of agreed-upon principles, norms, rules, and decision-making procedures that govern the interactions of actors in specific issue areas” (Osherenko & Young 1993, p. 1). The latter definition shall be applied to this thesis.

Regulation: Pearsall & Hanks (1998, p. 1564) describe regulation as “rules or directives made and maintained by an authority”. Baldwin *et al.* (1998, p. 3) argue that, in a very narrow sense, “regulation refers to the promulgation of an authoritative set of rules, accompanied by some mechanism, typically a public agency, for monitoring and promoting compliance with these rules”. Jordana & Levi-Faur (2004, p. 7) emphasise that regulation in the sense of social control has gained meaning in the last few decades as a response to an increasing number of international regimes governing common pool resources. These newly formed and forming regimes, which are often based on (semi-) consensus systems and voluntary agreements, result in more complex and diverse layers of governance and often-times discount aspects of national sovereignty (Jordana & Levi-Faur 2004, p. 7). The Antarctic Treaty System clearly

falls under the latter category, and consequently ATS regulation can be regarded as a social control extended to ATCPs and their nationals.

For the sake of simplicity, the term self-regulation is used synonymously with IAATO in this thesis, because most of the study participants have interchangeably applied these two terms and have ignored other self-regulatory tools for Antarctic tourism. For a discussion of other self-regulatory mechanisms the reader is referred to Molenaar (2005).

Sovereignty: National sovereignty describes the ultimate and unconditional power and acknowledged independence of states to control their territory (Buck 1998, p. 27). According to Black, sovereignty represents “[t]he power to do everything in a state without accountability ..., – to make laws, to execute and to apply them, to impose and collect taxes and levy contributions, to make war or peace, to form treaties of alliance or of commerce with foreign nations, and the like” (Black’s Law Dictionary as cited in Buck 1998, p. 27).

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APPENDICES



Please note: For environmental reasons, the author refrains from attaching copies of the Antarctic Treaty, the Protocol, and other regulatory instruments adopted during Antarctic Treaty Consultative Meeting to the Appendix. These documents are all accessible through the Antarctic Treaty Secretariat's website and document database (www.ats.aq/).

Appendix 1: Interviews – information sheet and confidentiality declaration

PhD Research Project

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Antarctic Tourism and Regulatory Considerations

In the last few years, the number of tourists visiting Antarctica has increased rapidly to more than to over 15,600 tourists in the 2001/02 season, over 17,500 in the 2002/03 season and even to over 27,500 in the 2003/04 season (IAATO, 2005). Equally, the numbers and scale of tour operators as well as the amount of non-governmental expeditions and private yachts cruising Antarctic and sub-Antarctic waters have risen. A “horizontal growth” of tourism to the Antarctic was also accompanied by a diversification with respect to the characteristics of the tour packages offered, which could broadly be referred to as “vertical growth”. As a consequence, Antarctic tourism nowadays appears on top of the agenda for a variety of institutions, organisations and policy-makers involved in managing, regulating or protecting the Antarctic ecosystem.

Current debates dealing with the growth of Antarctic tourism centre on the issue of self-regulation versus government control. The International Association of Antarctica Tour Operators (IAATO) represents a network of tour operators that advocate and agree to provide safe and environmentally conscious forms of tourism to the Antarctic through self-applied guidelines and codes of conduct.

However, this self-regulatory regime currently finds itself under increasing pressures from Antarctic Treaty signatories, environmental organisations or other NGOs campaigning for a centralised regulation of Antarctic tourism, and pressures arising from unregulated activities by companies operating outside IAATO.

In response to the additional pressures upon such a self-regulatory regime, this research project attempts to focus on the following question:

Faced with the challenges of multinational governance and an increasing diversification and growth of tourism can a self-regulatory regime adequately, effectively and sustainably manage Antarctic tourism?

Hence, it attempts to

- discuss the adequacy and effectiveness of a self-regulatory framework with respect to Antarctic tourism whilst taking into account the unique nature of the political and legal framework governing the Antarctic continent;
- investigate the types and practices of Antarctic tour operators under consideration of the existing institutional framework regulating human activities in Antarctica;
- analyse the potential for internationally comparable and standardised ways to sustainably manage Antarctic tourism; and
- develop a framework for an effective regulation of Antarctic tourism embracing internal and external regulation mechanisms whilst paying attention to the diffusion of power and interest and to the varying approaches towards managing the Antarctic environment.

Appendix 2: Consent form for the interviews

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NEW ZEALAND

CONSENT FORM

Antarctic Tourism and Regulatory Considerations

I herewith declare that I have been informed about the general purpose and objectives of the above-named research project. I understand that my participation in this study may contribute to a greater understanding of the effectiveness of the current self-regulatory regime for Antarctic tourism, factors influencing its success and challenges it has to face.

I understand that my participation is voluntary and not expected to involve any risks of harm greater than those encountered in daily life. In all cases, participants and their comments will remain anonymous and confidential.

I realize I am free to withdraw my consent and to withdraw my involvement at any time without negative consequences. I can also withdraw any material I previously provided at any time. I also understand that I am free to withhold my response to any particular question.

I also understand that the results of this research may be published or reported to research institutes, government agencies, non-governmental organisations, funding agencies, or scientific groups.

Before any publication will take place, I will be provided a transcript of the interview or a draft written report, which I will have two weeks to review for the purpose of verifying and/or correcting factual data, requesting removal of confidential information, and providing comments and suggestions for consideration in the final version.

I acknowledge that I understand my rights as a research participant as outlined above and consent to participate in this research.

Institution/Organisation: _____

Name (please print): _____

Signature: _____

Date: _____

Appendix 3: Example of the tabularised summary of the structured analysis of the interviews

(A few select columns)

Initial coding	Date	Priorities of management	Threats to the ATS	Challenges for future management	Tourism industry self-regulation	Changes in tourism industry/development of Antarctic tourism	Cooperation between tour operators/IAATO and government	Conflicts of interest between ATPs	Cooperation among treaty parties	Future (anticipated) development of ATS	Regulation through ATS/consensus-based system	Enforcement, monitoring and policing	Observed misconduct among tourists
R1_P35	3/05/2006	US: continent needs to remain open and available for legitimate scientific research; everything else is secondary	opening stations to tourism poses a potential problem in terms of sovereignty issues and tourism regulation	environmental protection in the face of tourism growth; property rights issues (and associated difficulties with land-based tourism); sovereignty issues	IAATO plays an important role because they are the tourism experts; close cooperation needed, but ATPs will be the ones making the ultimate decisions ("We can't just allow self-regulation.")	increasing numbers of tourists, tour operators and ships => increasing pressure on limited number of visited sites; larger vessels => may be necessary to restrict landings: land-based tourism development potentially an issue (SAR & contingency planning in	"generally quite well"; good relationship; IAATO is respected and "their opinions are valued"; some disagreements over guidelines in 2005, but "we have gotten over it"	no significant conflicts of interest; some countries want to push for their sovereignty claims; but otherwise ATS has been "remarkably free of conflict" (this is not likely to change in the future)	works quite well (a lot of give and take at the meetings) => collegial, cooperative, somehow like a CLUB (everyone knows each other); some countries less rigorous in implementing the Protocol when it comes to tourism	one future potential problem might be opening up scientific stations to tourism (e.g. Uruguay) might make it harder to regulate tourism; no need for more regulation right now (rather existing rules should be implemented); site guidelines a good flexible t	ATS quite slow in reacting to issues due to consensus and number of parties involved (decisions can really never be made intersessionally), but system is still very flexible as the parties can decide to do almost whatever they want; consensus system is a	so far no consistent checking of departure ports; enforcement, monitoring and policing difficult as there is no Antarctic police; reliance upon the goodwill of operators (self-interest to maintain sites)	US: occasionally a yacht operator not knowing or following rules, but harm would be very small
M2_P29	13/04/2006	1. no "scene of international discord" (geopolitical objective); 2. priority to science; 3. comprehensive environmental protection (according to the order in which they evolved)	Antarctica is a "very shaky juridical environment" => geopolitical stability is a big concern [sovereignty claim issues vs. impact of global tourism industry and power of tourism businesses] => tourism dollars South American states may make for science;	environmental consequences of tourism likely to "become more severe" with rising numbers; diversified industry/other sorts of tourism may pose more challenges (land-based tourism => invasive species & possible exploration of untouched areas by tourists rather than	majority of tour operators "as conscientious as possible", but "practical limitations" exist; historically, IAATO had a positive role in regulating Antarctic tourism ([...] critique of IAATO might have been misunderstood) => good idea to have an association	"biggest threat [of Antarctic tourism] right now is the trajectory"; rapid growth, which "at long term overcomes (...) improvements in performance by individual operators"; diversification of industry; risk of accident; tourism not point-located as science	"there are commonalities" but also "important differences" (IAATO – industry body => has to look after the business interests of its members => "narrower set of interests" (tourism industry and NGO community share a common anxiety about mining)			Antarctic tourism regulation through ATS is very important: "the immediate, potential mechanism through which to regulate it" (even if it doesn't work very well right now, it is potentially able to regulate it); there is currently a lot of innovation going	tourism = legitimate activity (but "contingent activity") => ATS and EIA "blind to the purpose of the activity" (although "moral judgements about the acceptability of impact based on other criteria than are currently encoded in the ATS" are needed)	monitoring will have to be dealt with in "manageable chunks" (on a regional or sub-regional basis) => not that complicated as most activity focuses on Peninsula region; monitoring should be done independently (question is Who pays?) => should not be done	observed person getting too close to wildlife not to harm them, but due to a lack of understanding; but some people extremely sensitive and aware and conscientious; discrepancies between ethics and practice observed all the time as ethics are just "pos

Coding	Date	Advantages and disadvantages of IAATO membership	Influence on decision-making within IAATO	Challenges or threats for Antarctic tourism	Tourism industry self-regulation/primary purpose of IAATO	Future tourism development	Transition from small owner-operators to large multi-nationals	Cooperation between tour operators/IAATO and government	Cooperation among IAATO members	Conflicts/non-members	Risks involved in Antarctic tourism	Regulation through ATPs/ATS	Enforcement, monitoring, policing and sanctioning
Q2_P7	27/04/2006	advantages: working toward environmental protection; 500-pax. limit may be a disadvantage for other big-ship operators to join IAATO; price in time can vary hugely depending on individual involvement	"normal for a largish international group"; some people more active than others, but that is true everywhere	relationship with ATS is both threat and challenge as the ATCPs ultimately control tourism	IAATO should try to accommodate things being brought into the ATS; shared passion or love for the Antarctic; peer pressure; the motivation to do everything right	more states acceding to the ATS; Antarctica should still be visited by enough people so that there is an appreciation for the place, but "it can get overrun"; new worrisome range of problems through land-based tourism (vast problems of individual impact)	Holland America and Princess Cruises have been there already for quite some time; other than that no judgement was made	good interactions between the primary players	peer pressure is very beneficial in terms of imposing and complying to strict guidelines	non-members are by definition rogue operators as they are not in IAATO => pressure issued from IAATO	environmental and human problems caused by shipping disasters, especially if big ships are involved; environmental impact on sites might be negative if more and more people are being brought in; access to Antarctica should not generally be restricted	ATS governs everything; IAATO principles are based on that, rooted in the Protocol; underlying bottom line; the ATS has been a very positive and admirable international regime with respectable goals	enforcement is difficult because of the peculiar legal situation of Ant.; policing could mean military presence (which is not feasible – ATS); enforcement seems to be an almost insolvable issue; sanctioning of misconduct of tourists by sending them back t

Appendix 4: Delphi study – questionnaire used for the first round

Aim of the Study

This study is aimed at providing background information for a PhD research project that investigates the effectiveness and adequacy of the current regulatory regime for Antarctic tourism.

Reasons for Choosing a Delphi Study

To discuss future implications of Antarctic tourism regulation, the expertise of a wide range of Antarctic stakeholders (Antarctic scientists, policy-makers, tourism and social science researchers, tour operators, environmentalists) will be needed. As the Delphi allows for the anonymous and structured analysis of a complex problem by experts, it seems to be the method of choice to achieve the aforementioned aim.

Process

Conventionally, a Delphi study involves a process of iteration and the provision of feedback. The responses to this questionnaire will be analysed, summarised and sent back in a compiled version to the participants, who are then invited to review and either strengthen and support or modify their initial statements in light of the comments provided by other participants. This process will be repeated for two or three times depending on the variety of the individual responses.

Anonymity and Confidentiality

Anonymity and confidentiality are guaranteed in accordance with the Human Ethics Provisions of the University of Canterbury, New Zealand. The names and identities of the participants will not be disclosed.

Time To Complete the Questionnaire

The time it will take you to complete the questionnaire will largely depend on how much detail you provide in the open-answer boxes. In total, there are 43 questions, and it should take between 30 and 50 minutes to complete all of them.

Contact

Any questions or comments?

Please contact Daniela Haase at dha48@student.canterbury.ac.nz.

Instructions

On the following pages, you will find a list of questions regarding the current and potential future regulation of Antarctic tourism. Please try to respond to all of them and enter clear, specific and concise comments into the text boxes where you are prompted to do so.

Feel free to add additional comments or remarks, where possible, even if you are not explicitly asked to do so.

If you feel that you do not have enough expertise in a certain area to answer a question, you have the option to resort to "no judgement" as a reply.

THANK YOU FOR YOUR COOPERATION.

Strengths and weaknesses of the ATS and self-regulation

1. List, in order of priority, the **five main strengths** of the **self-regulatory system** of Antarctica tour operators.
(1 = Highest priority, ..., 5 = Lowest priority)

1.
2.
3.
4.
5.

2. List, in order of priority, the **five main areas of concern** with respect to the **self-regulatory system** of Antarctica tour operators.
(1 = Highest priority, ..., 5 = Lowest priority)

1.
2.
3.
4.
5.

3. List, in order of priority, the **five main strengths** of tourism regulation through the **Antarctic Treaty System**.
(1 = Highest priority, ..., 5 = Lowest priority)

1.
2.
3.
4.
5.

4. List, in order of priority, the **five main areas of concern** with respect to tourism regulation through the **Antarctic Treaty System**.
(1 = Highest priority, ..., 5 = Lowest priority)

1.
2.
3.
4.
5.

Development of Antarctic tourism

5. How do you envision Antarctica to be **in 25 years** from now?
(e.g. Should Antarctica be preserved as a wilderness and look largely the same as it does today? Should Antarctica's resources – be it minerals, icebergs/water, fish, ... – be used for the benefit of mankind? Should more permanent research stations be built on the ice to allow for even more comprehensive year-round research projects to be conducted? Should permanent infrastructure catering tourists be built? Etc...)

6. What are your **major concerns** with respect to **Antarctic tourism development** over the next 25 years?

7. What are your **hopes** regarding the **development of Antarctic tourism** over the next 25 years?

Antarctic tourism regulation

8. How would you rate the **stability of the Antarctic Treaty System (ATS)** in the next 25 years? (Please highlight your choice.)
- Very stable
 - Reasonably stable
 - Relatively unstable
 - Very unstable
 - No judgement

Please explain your choice and briefly comment on issues or events which, in your opinion, would significantly influence the stability of the ATS.

9. In your personal opinion:
- Should Antarctic tourism be **regulated**? (Please highlight your choice and briefly comment or qualify it.)
Yes
No

- b. **How** should Antarctic tourism be regulated?

- c. **Whose responsibility** should the regulation of Antarctic tourism be?

- d. **What** should the regulation be aimed at?

(e.g. behaviour ashore; personal safety; reduction of environmental impact; regulation of numbers of people ashore at any one time; time spent ashore; etc.)

10. Should **rules and regulation** concerning **human activities** in Antarctica be ...

- a. binding,
- b. voluntary,
- c. a combination of both, binding and voluntary?

Please explain your choice:

Would you choose differently if the term "*human activities*" in this question were changed to "**tourist activities**"?

Responsibilities for Antarctic tourism regulation

11. Please indicate (by putting an "x" in the respective boxes) in the table below **who** should assume responsibility **for which aspect** of Antarctic tourism regulation. (N.B. Multiple answers per row and column are possible.)

(1) Design of Antarctic tourism regulation (i.e. who should draft and develop it)

(2) Voting on the adoption of proposed regulatory instruments (i.e. who should have decision-making power)

(3) Implementation of these instruments (i.e. who should be responsible to put them into practice)

(4) Enforcement of these instruments (i.e. who should be responsible to induce and oversee enforcement)

(5) Monitoring of compliance (i.e. who should be responsible for controlling the degree of compliance)

(6) Policing (i.e. who should be responsible for sanctioning in compliance)

(a) *Antarctic Treaty Consultative Parties*

(b) *UN system* (i.e. countries that are not member states of the ATS will have their say as well)

(c) *International Association of Antarctica Tour Operators* (i.e. the facilitators of the self-regulatory system)

(d) *All Antarctica tour operators*, no matter whether they are IAATO members or not

(e) *National governments*

(f) *Environmental organisations* (e.g. Greenpeace, ASOC, IUCN, WWF, ...)

(g) *Others*, please specify:

- | | | |
|-----|----------------|--|
| (1) | Design | |
| (2) | Voting | |
| (3) | Implementation | |
| (4) | Enforcement | |
| (5) | Monitoring | |
| (6) | Policing | |

Who	ATCPs (a)	UN sys- tem (b)	IAATO (c)	Tour opera- tors (d)	National gov- ernments (d)	Env. organi- sations (e)	Others (f)
What							
Design (1)							
Voting (2)							
Implementation (3)							
Enforcement (4)							
Monitoring (5)							
Policing (6)							

Regulatory instruments

12. In terms of regulating Antarctic tourism, **how successful** is the **Protocol on Environmental Protection to the Antarctic Treaty** in your view?
(Please highlight your choice.)

- a. Very successful
- b. Successful
- c. Mildly successful
- d. Unsuccessful
- e. No judgement

Please comment on your choice:

13. *The Protocol forms the backbone for the regulation of human activities in Antarctica. Therefore, it is essential to strengthen the provisions of the Protocol and to improve the coherence of its implementation.*

- a. How **relevant** do you think this statement is regarding the effective regulation of Antarctic tourism?
(Please highlight your choice.)
- i. **Most relevant** (first-order priority; of direct relevance for major issues)
 - ii. **Relevant** (second-order priority; of minor or indirect relevance for certain issues)
 - iii. **Insignificantly relevant** (third-order priority; not essential; not a determining factor)
 - iv. **Irrelevant** (no priority; no measurable effect; should be dropped as an item to consider)
 - v. No judgement
- b. How **confident** are you regarding the validity of this statement?
(Please highlight your choice.)
- i. **Certain** (low risk of being wrong; decision based upon this will not be wrong as it is an established "fact"; most inferences drawn from this will be true)
 - ii. **Reliable** (some risk of being wrong; willing to make a decision based on this statement but recognising some chance of error; some incorrect inferences can be drawn)
 - iii. **Risky** (substantial risk of being wrong; not willing to make a decision based on this statement alone; many incorrect inferences can be drawn)
 - iv. **Unreliable** (great risk of being wrong; statement is of no use as a decision basis)
 - v. No judgement

14. What kind of benefits could be derived from an **accreditation scheme** for Antarctica tour operators?

15. What **important features** should such an accreditation scheme have?

16. How successful are **Resolutions 3 (1995 & 1997)** that require notification about tourist activities regarding their implementation and enforcement?
(Please highlight your choice.)

- a. Very successful
- b. Successful
- c. Mildly successful
- d. Unsuccessful
- e. No judgement

17. Which **regulatory mechanisms** do you envision as being **most effective and successful** in the future?
[N.B. You are encouraged to think beyond the tools that are currently available and imagine totally new approaches.]

18. Do you see any potential for **port-state jurisdiction** to play a greater role in regulating Antarctic tourism?
(Please highlight your choice.)
- a. Yes
 - b. No

If yes, **how** can port-state jurisdiction play a greater role in regulating Antarctic tourism?

What changes should have to be made to achieve effective port-state jurisdiction?

Effectiveness of the regulatory regime

19. *It has repeatedly been suggested that the Antarctic Treaty System does not have teeth with respect to regulating Antarctic tourism.*

- a. How **relevant** do you think this statement is regarding the effective regulation of Antarctic tourism?
(Please highlight your choice.)
 - i. **Most relevant** (first-order priority; of direct relevance for major issues)
 - ii. **Relevant** (second-order priority; of minor or indirect relevance for certain issues)
 - iii. **Insignificantly relevant** (third-order priority; not essential; not a determining factor)
 - iv. **Irrelevant** (no priority; no measurable effect; should be dropped as an item to consider)
 - v. No judgement
- b. How **confident** are you regarding the validity of this statement?
(Please highlight your choice.)
 - i. **Certain** (low risk of being wrong; decision based upon this will not be wrong as it is an established "fact"; most inferences drawn from this will be true)
 - ii. **Reliable** (some risk of being wrong; willing to make a decision based on this statement but recognising some chance of error; some incorrect inferences can be drawn)
 - iii. **Risky** (substantial risk of being wrong; not willing to make a decision based on this statement alone; many incorrect inferences can be drawn)
 - iv. **Unreliable** (great risk of being wrong; statement is of no use as a decision basis)
 - v. No judgement

20. **How successfully** do the following organisations/individuals deal with the aspects of Antarctic tourism regulation that are listed in parentheses?

- a. **Antarctic Treaty Parties** (regarding **governmental control and permitting**)

- b. **IAATO** (regarding **self-regulation and monitoring** of compliance)

- c. **Individual tour operators** (regarding **Antarctic tourism practice**)

21. What issues related to the regulation of human activities in the Antarctic need to be addressed **as soon as possible**?

22. **How effective** are the **site-specific guidelines** that are currently in place? (Please highlight your choice.)

- a. Very successful
- b. Successful
- c. Mildly successful
- d. Unsuccessful
- e. No judgement

Please comment on your choice:

Issues of feasibility

23. **How desirable** are **site-specific guidelines** as a regulatory mechanisms for Antarctic tourism?

[N.B. **Desirability** = advantages vs. disadvantages of the respective scheme]

(Please highlight your choice.)

- i. **Highly desirable** (Will have a positive effect and no or negligible negative effect; extremely beneficial; justifiable on their own merit)
- ii. **Desirable** (Will have a positive effect and little or no negative effect; largely beneficial; justifiable in conjunction with other items)
- iii. **Undesirable** (Will have a negative effect; detrimental; may be justified only as a by-product of a very desirable item, not justifiable on their own)
- iv. **Highly undesirable** (Will have a major negative effect; extremely detrimental; not justifiable in any case)
- v. No judgement

24. **How feasible** are **site-specific guidelines** as a regulatory mechanisms for Antarctic tourism?

[N.B. **Feasibility** = practicality regarding the implementation and enforcement]

(Please highlight your choice.)

- i. **Definitely feasible** (no hindrance to implementation, no obstacles regarding enforcement; no political road-blocks; major opposition highly unlikely; generally acceptable to the public and the parties involved in their implementation, enforcement or monitoring)
- ii. **Possibly feasible** (generally implementable and enforceable, although some further analysis and/or negotiations may be needed; some opposition likely, but none that could not be dealt with in negotiations or further discussion; further work and/or amendments may be needed in consideration of political pressures or public reaction)
- iii. **Rather unfeasible** (some problems with the current design; some aspects may be unworkable; opposition is likely, even among decision-makers; further negotiations will definitely be needed; most likely amendments will have to be made to come to an agreement)
- iv. **Definitely unfeasible** (overall indications are negative; unworkable; opposition would be too great; cannot be implemented or enforced)
- v. No judgement

25. *IAATO has been criticised by ATPs of being driven by self-interest. The tour operators argue that it is exactly this self-interest that should be regarded as beneficial to the Antarctic environment. They sell Antarctica as a pristine wilderness destination and will do their utmost to maintain it in a pristine condition.*

a. How **relevant** do you think this statement is regarding the effective regulation of Antarctic tourism?
(Please highlight your choice.)

- i. **Most relevant** (first-order priority; of direct relevance for major issues)
- ii. **Relevant** (second-order priority; of minor or indirect relevance for certain issues)
- iii. **Insignificantly relevant** (third-order priority; not essential; not a determining factor)
- iv. **Irrelevant** (no priority; no measurable effect; should be dropped as an item to consider)
- v. No judgement

b. How **confident** are you regarding the validity of this statement?
(Please highlight your choice.)

- i. **Certain** (low risk of being wrong; decision based upon this will not be wrong as it is an established "fact"; most inferences drawn from this will be true)
- ii. **Reliable** (some risk of being wrong; willing to make a decision based on this statement but recognising some chance of error; some incorrect inferences can be drawn)
- iii. **Risky** (substantial risk of being wrong; not willing to make a decision based on this statement alone; many incorrect inferences can be drawn)
- iv. **Unreliable** (great risk of being wrong; statement is of no use as a decision basis)
- v. No judgement

What is **your take** on the issue presented above?

Finally ...

1. Do you feel that certain questions in the above questionnaire should be rephrased and resubmitted for "voting" in the second round? Please list these questions and clarify how they should be phrased and why.

2. Have important points regarding the current and potential future regime of Antarctic tourism been omitted? If so, please list any questions you would like to add to the questionnaire.

3. Are there any further comments or points you would like to draw our attention to?

Thank you for your cooperation.

You will receive an email with the results of the first round and an invitation to participate in the second round of the Delphi study in March.

If you have any questions or comments, please contact Daniela Haase (dha48@student.canterbury.ac.nz).

Appendix 5: Delphi study – questionnaire used for the second round

1. Please comment on the **validity** of following statements. Are these statements valid in and of themselves?

1. *The Protocol forms the backbone for the regulation of human activities in Antarctica. Therefore, it is essential to strengthen the provisions of the Protocol and to improve the coherence of its implementation.*

Comment:

•

2. *It has repeatedly been suggested that the Antarctic Treaty System does not have teeth with respect to regulating Antarctica.*

Comment:

•

3. *IAATO has been criticised by ATPs as being driven by self-interest. The tour operators argue that it is exactly this self-interest that should be regarded as beneficial to the Antarctic environment. They sell Antarctica as a pristine wilderness destination and will do their utmost to maintain it in a pristine condition.*

Comment:

•

2. How would you **rank** the following issues on a scale from 1 to 6 **with respect to their importance for regulatory intervention?**

[N.B. 1 – regulatory intervention is of greatest importance; 6 – regulatory intervention is least important]

Issues	Rank
Increasing numbers of tourists visiting Antarctica	
Increasing scale of the Antarctic tourism industry	
Cumulative impacts (solely tourism-related, for the purpose of this task)	
Permanent land-based facilities for tourists	
Incidents and accidents	
Availability of air links for tourist purposes	

3. Should **ship-borne and land-based tourism** operations be treated in the same way?

Yes

No

Comment:

•

4. What components should an **integrated regulatory framework** for Antarctic tourism ideally consist of?

•

5. What are the pros and cons of having an **overarching regulatory instrument** for tourism?

[N.B. Examples of such an overarching regulatory instrument could be a separate Annex on tourism to the Protocol or an Antarctic Tourism Convention.]

•

6. What role do the following stakeholders or issues play with respect to Antarctic tourism regulation?

Third Party States

-

Non-members of IAATO

-

Large cruise vessels

-

Changing power relationships between ATCPs and IAATO

-

Territorial sovereignty issues and opposing stances

-

Technological change supporting the move from largely sea-borne tourism to fly-cruise

-

Education of tourists and the public about aspects of Antarctica such as its environment

-

7. Do you consider **zoning** of tourist areas to be a potentially powerful management mechanism?

-

8. What are the roles and implications of official or less formal tourism guidelines?

-

9. Should land-based operations continue?

-

10. What implications does the diversification of Antarctic tourism activities have for tourism regulation?

-

Appendix 6: Array of regulatory mechanisms adopted during ATCMs

Recommendation	Place	Date	Subject	Status	Title	Context	Reference to	Attachment
Recommendation IV-27	Santiago	1966	Regulation of Antarctic tourism	Effective (30/10/1968)	Effects of Antarctic tourism	exchange of information re. station visits; governments should make information regarding the conditions for tourist visits available		
Recommendation VI-7	Tokyo	1970	Regulation of Antarctic tourism	Effective (10/10/1973)	Effects of tourists and non-government expeditions to the Antarctic Treaty area	governments are to ensure that activities of tourists/visitors are in alignment with the goals of AT; advance notice of all non-governmental activities; advance notice of station visits (24–72 hrs); visitors are not to enter AS-PAs	§5 of Art. VII and Art. 10 of AT; Rec. I-VI and IV-27	
Recommendation VI-11	Tokyo	1970	Special protection for new islands	Effective (10/10/1973)	New Islands	efforts to prevent tourists from landing on new islands		
Recommendation VII-4	Wellington	1972	Effects of tourist activity	Effective (24/06/1981)	Effects of tourists and non-government expeditions in the Antarctic Treaty area	effects of tourist activities to be kept under review; suggestion to develop guidelines on accepted practices & determination of areas of special tourist interest at VIII ATCM; conservation of flora & fauna to be ensured with respect to activities of tourists and non-governmental expeditions	Rec. VI-7 & VI-11	
Recommendation VIII-9	Oslo	1975	Statement of Accepted Practices	Effective (01/11/1982)	Effects of tourists and non-government expeditions in the Antarctic Treaty area	advance notification for station visits essential; landings of tourist groups only within ASTIs (to be defined in IX ATCM); to ensure awareness of the statement of accepted practices (to be defined in IX ATCM)	Rec. VII-4	Tourism guidelines
Recommendation X–8	Washington	1979	Tourist Regulation	Effective (08/04/1987)	Effects of tourists and non-government expeditions in the Antarctic Treaty area	Accepted practices & relevant AT provisions outlined; non-governmental expeditions are urged to carry adequate insurance; tour operators should employ experienced tour guides; governments are to notify aircraft operators that present level of overflights exceeds capacities	Rec. VIII-9	Guidance for Visitors to the Antarctic; Statement of accepted principles
Recommendation XVI-13	Bonn	1991	Intersessional meeting on tourism	Not yet effective (Spent⁹³)	Tourism and non-governmental activities in the Antarctic Treaty area	informal meeting of parties recommended to discuss tourism issues (environmental & operational); proposals invited		
Recommendation XVIII-1	Kyoto	1994	Guidelines for tourism	Not yet effective	Tourism and non-governmental activities	Guidelines for Visitors to the Antarctic and Guidance for Those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic to be circulated; visitors/operators urged to act according to the guidelines		Tourism guidelines
Resolution 3	Seoul	1995	Tourist reporting	Adopted (19/05/1995)	Reporting of tourism and non-governmental activities	recommendation to include specific information in post-activity reports (see list in Resolution 3 [1995])	Attachment A to Rec. XVIII-1	
Resolution 1	Christchurch	1997	Contingency plans	Adopted (30/05/1997)	Emergency response action and contingency planning	all ATPCs should ensure that all stations, vessels & operations are covered by contingency plans; IPs by COMNAP & IAATO outlining their contingency plans to be submitted for the next ATCM	Art. 15 and Annex IV of the Protocol	

⁹³ Recommendation XVI-13 is listed as “spent” in Annex A of Decision 3 (2002), which outlines that spent measures do not require further action by the Parties

Recommendation	Place	Date	Subject	Status	Title	Context	Reference to	Attachment
Resolution 3	Christchurch	1997	Tourism reporting form	Adopted (30/05/1997)	Standard form for advance notification and post-visit reporting on tourism and non-governmental activities in Antarctica	a standard form is recommended to be used for advance notification and post-visit reporting (trial form attached)	Res. 3 (1995); Attachment A to Rec. XVIII-1	Trial report form for tourism and NGO activities in Antarctic Treaty area
Resolution 3	Tromsø	1998	Draft Polar Shipping Code	Adopted (05/06/1998)	International Code of Safety for Ships in Polar Waters	Recommendation to have ATCPs provide input to IMO on the draft of the Polar Shipping Code that IMO is working on	Art. 10 of Annex IV to the Protocol	
Decision 5	Madrid	2003	Expert meeting on tourism	Adopted (20/06/2003)	Meeting of experts on tourism and non-governmental activities	meeting of experts on tourism issues requested; list of topics suggested for discussion include: guidelines, adventure tourism, monitoring, EIA, safety & SAR, jurisdiction & self-regulation, coordination among national operators; Intersessional Contact Group to be established	Rec. IV-24	
Resolution 1	Madrid	2003	Advice to vessel and yacht operators	Adopted (20/06/2003)		recommendation that ATPs publishing advice for vessel operators should include sufficient detail of the Protocol (particularly Annex IV)	Annex IV of the Protocol	
Decision 4	Capetown	2004	Shipping guidelines	Adopted (04/06/2004)	Guidelines for ships operating in Arctic and Antarctic ice-covered waters	decision to endorse shipping guidelines as developed by COMNAP and urge for their transmission to & consideration by the IMO	Art. 10 of Annex IV to the Protocol	Guidelines for ships operating in Arctic and Antarctic waters
Measure 4	Capetown	2004	Tourism and non-governmental activities	Not yet effective	Insurance and contingency planning for tourism and non-governmental activities in the Antarctic Treaty area	governments shall require operators to have appropriate contingency plans and self-sufficient medical care & evacuation + SAR plans in place prior to departure; insurance required to cover costs	Attachment A to Rec. XVIII-1; Art. VII (5) of the AT; Art. IX §4 of the AT	
Resolution 3	Capetown	2004	Tourism and non-governmental activities	Adopted (04/06/2004)	Tourism and non-governmental activities: enhanced cooperation amongst parties	concern about increasing trend in tourism and need to ensure more rigorous monitoring expressed; recommended that all parties nominate a single point of contact for tourism issues; exchange of information on tourism activities, especially if activities have implications for other parties		
Resolution 4	Capetown	2004	Tourist guidelines	Adopted (04/06/2004)	Guidelines on contingency planning, insurance and other matters for tourist and other non-governmental activities in the Antarctic Treaty Area	recommendation to have operators/organisers of tourist/non-governmental activities (that have to provide advance notification) follow the attached tourism guidelines (appropriate contingency plans & insurance cover required; experience, fitness, sound equipment)	Attachment A to Rec. XVIII-1; Measure 4 (2004); Art. VII (5) of the AT	Tourism guidelines
Decision 8	Stockholm	2005	Use of Heavy Fuel Oil	Adopted (17/06/2005)	Use of Heavy Fuel Oil (HFO) in Antarctica	Decision to request IMO to consider restrictions on the use of HFOs in Antarctic waters	Art. 3 and Annex IV of the Protocol	
Resolution 2	Stockholm	2005	Guidelines for environmental monitoring	Adopted (17/06/2005)	Practical guidelines for developing and designing environmental monitoring programs in Antarctica	recommendation to use the attached guidelines for environmental monitoring by NAPs in order to ensure a consistent and proper methodology		Practical Guidelines for Developing and Designing Environmental Monitoring Programs in Antarctica
Resolution 4	Stockholm	2005	Revised EIA guidelines	Adopted (17/06/2005)	Updating of guidelines for environmental impact assessment in Antarctica	Res. 1 (1999) guidelines are recommended to be replaced by the attached guidelines	Res. 1 (1999)	Amended Guidelines for EIA
Resolution 5	Stockholm	2005	Site guidelines for visitors	Adopted (17/06/2005)	Resolution on site guidelines for visitors	site guidelines for four sites in the Antarctic Peninsula region recommended to be adhered to and disseminated widely; flexibility & options for changing guidelines to reflect environmental changes should be ensured	Rec. XVIII-1	List of sites subject to site guidelines: Aitcho Islands, Cuverville Island, Jougla Point, Penguin Island

Recommendation	Place	Date	Subject	Status	Title	Context	Reference to	Attachment
Resolution 6	Stockholm	2005	Post Visit Site Report Form	Adopted (17/06/2005)	Antarctic post-visit site report form	Recommendation to use the attached revised version of the post-visit site report form from now on	Res. 3 (1995); Attachment A to Rec. XVIII-1; Res. 3 (1997)	Post visit site report form for tourism and non-governmental activities in Antarctica
Decision 2	Edinburgh	2006	Ballast water exchange: referral to IMO	Adopted (23/06/2006)	Ballast water exchange in the Antarctic Treaty area	decision to request host government of XXIX ATCM to forward Practical Guidelines for Ballast Water Exchange in the AT area to IMO for appropriate action	Res. 3 (2006)	
Resolution 2	Edinburgh	2006	Site guidelines for visitors	Adopted (23/06/2006)	Resolution on Site Guidelines for Visitors	confirmation that the term "visitors" does not include scientists conducting research within these sites or other governmental officers; recommendation to extend the list of site guidelines by further eight sites	Res. 5 (2005); Rec. VXIII-1	List of sites subject to site guidelines: Barrientos Island, Cuverville Island, Goudier Island, Jougla Point, Hannah Point, Neko Harbor, Paulet Island, Penguin Island, Petermann Island, Pleneau Island, Turret Point, Yankee Harbour
Resolution 3	Edinburgh	2006	Ballast water exchange	Adopted (23/06/2006)	Ballast water exchange in the Antarctic Treaty area	recommendation to have the annexed practical guidelines be used by all ships in the AT area (except for those referred to in Art. 3 §2 of the IMO Ballast Water Management Convention)	Annex II of the Protocol	Annex: Practical Guidelines for Ballast Water
Resolution 1	New Delhi	2007	Site guidelines for visitors	Adopted (11/05/2007)	Resolution on site guidelines for visitors	confirmation that the term "visitors" does not include scientists conducting research within these sites or other governmental officers; recommendation to extend the list of site guidelines by further two sites	Res. 5 (2005); Res. 2 (2006); Rec. VXIII-1	List of sites subject to site guidelines: Barrientos Island, Brown Bluff, Cuverville Island, Goudier Island, Jougla Point, Hannah Point, Neko Harbor, Paulet Island, Penguin Island, Petermann Island, Pleneau Island, Snow Hill, Turret Point, Yankee Harbour
Resolution 4	New Delhi	2007	Ship-based tourism	Adopted (11/05/2007)	Ship-based Tourism in the Antarctic Treaty Area	recommendation that ATPs should "discourage or decline to authorise tour operators" with vessels carrying more than 500 passengers from landing; ATPs should "encourage or require" operators to adhere to the <i>one ship, one place, one moment</i> principle, to never have more than 100 passengers on shore at any one time and to maintain a 1:20 guide-to-passenger ratio		
Resolution 5	New Delhi	2007	Long-term effects of tourism	Adopted (11/05/2007)	Tourism in the Antarctic Treaty Area	recommendation that ATPs should discourage tourism activities which could potentially contribute to the long-term degradation of the Antarctic environment	Art. 3 of the Protocol	List of sites subject to site guidelines: Barrientos Island, Aitcho Islands, Brown Bluff, Cuverville Island, Devil Island, Goudier Island, Port Lockroy, Half Moon Island, Hannah Point, Jougla Point, Neko Harbor, Paulet Island, Penguin Island, Petermann Island, Pleneau Island, Shingle Cove, Snow Hill, Turret Point, Whalers Bay (visitor site), Yankee Harbour
Resolution 2	Kyiv	2008	Site guidelines for visitors	Adopted (??/06/2008)	Resolution on site guidelines for visitors	confirmation that the term "visitors" does not include scientists conducting research within these sites or other governmental officers; recommendation to extend the list of site guidelines by further four sites	Res. 5 (2005); Res. 2 (2006); Rec. VXIII-1, Res. 1 (2007)	

Appendix 7: IAATO bylaws and codes of conduct

Appendix 7.1: IAATO bylaws⁹⁴

Article I: Foundation, Name, Registration, Headquarters

Section A.

The Association was founded in 1991 by seven Antarctic tour operators: Adventure Network International, Mountain Travel Sobek, Paquet/Ocean Cruise Lines, Salén Lindblad Cruising, Society Expeditions, Travel Dynamics and Zegrahm Expeditions.

Section B.

The name of the Association is "International Association of Antarctica Tour Operators." Henceforth, the abbreviated name "IAATO" will be used

Section C.

IAATO is registered in Olympia, Washington, USA.

Section D.

IAATO currently has its headquarters in Basalt, Colorado, United States. At present, IAATO does not have any affiliated Chapters, foreign or domestic. Chapters may be established in the future.

Article II: Objectives

Section A.

To represent Antarctic tour operators and others organizing and conducting travel to the Antarctic, to the Antarctic Treaty Parties, the international conservation community and the public at large.

Section B.

To advocate, promote and practice safe and environmentally responsible travel to the Antarctic.

Section C.

To circulate, promote and follow the Guidance for Visitors to the Antarctic and Guidance for Those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic, as adopted by the Antarctic Treaty System (Recommendation XVIII-1).

Section D.

To operate within the parameters of the Antarctic Treaty System, including the Antarctic Treaty and the Protocol on Environmental Protection to the Antarctic Treaty, along with IMO Conventions and similar international and national laws and agreements.

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.

Section F.

To foster continued cooperation among its members; to monitor IAATO programs, including the pattern and frequency of visits to specific sites within the Antarctic; and to coordinate itineraries so that no more than 100 passengers are ashore at any one time in any one place.

Section G.

To provide a forum for the international, private-sector travel industry to share their expertise and opinions and to uphold the highest standards.

Section H.

To enhance public awareness and concern for the conservation of the Antarctic environment and its associated ecosystems and to better inform the media, governments and environmental organizations about private-sector travel to these regions.

Section I.

To create a corps of ambassadors for the continued protection of Antarctica by offering the opportunity to experience the continent first hand.

Section J.

To support science in Antarctica through cooperation with national Antarctic programs, including logistical support and research; and to foster cooperation between private-sector travel and the international scientific community in the Antarctic.

Section K.

To ensure that the best qualified staff and field personnel are employed by IAATO members through continued training and education; and to encourage and develop international acceptance of evaluation, certification and accreditation programs for Antarctic personnel. IAATO expects its members to hire a staff team comprised of individuals with at least 75% previous Antarctic experience.

⁹⁴ New bylaws were adopted on 29 April 2008. These can be retrieved from www.iaato.org/bylaws.html.

Article III: Membership

Section A.

The membership is divided into seven categories:

1. Organizers of expedition ships that carry less than 200 passengers or small sailing vessels that carry less than 12 passengers. The limit of 100 passengers ashore at one site at one time applies.
2. Organizers of vessels carrying 200–500 passengers who are making passenger landings. Stringent restrictions on landing activities of time and place apply. The limit of 100 passengers on shore at one site at one time also applies.
3. Organizers of cruise ships making no landings (cruise only). Cruise ships carrying more than 500 passengers are not permitted to make any landings.
4. Organizers of land-based operations.
5. Organizers of air operators with over flights only.
6. Organizers of air/cruise operations.
7. Companies in support of Antarctic tourism.

The above seven categories, depending on organizer interests and type of activities, can be grouped into any of the following four major types of membership:

1. **Full Members** are experienced organizers who operate travel programs to the Antarctic and who: a) pledge to abide by IAATO Bylaws; b) agree to the above-mentioned categories and to not have more than 100 passengers ashore at any one site at the same time; c) maintain a staff-to-passenger ratio of 1:20 ashore, and d) have been formally accepted by two-thirds of the Full Members in good standing after review and fulfill any other requirement.
2. **Provisional Members** are organizers who operate travel programs to the Antarctic that are requesting Full membership in IAATO. Provisional Members must: a) pledge to abide by IAATO Bylaws; b) agree to the above-mentioned categories and do not have more than 100 passengers ashore at any one site at the same time; c) maintain a staff-to-passenger ratio of 1:20 ashore d) be formally accepted by two-thirds of the standing members after review and fulfill any other requirements for membership; e) agree to carry either an IAATO-approved or National Antarctic Program Observer aboard on a voyage as agreed to by IAATO and f) to forward a complete, unabridged Observer's report to the Secretariat following the conclusion of the voyage. Reasonable compensation (such as air transportation and related expenses) would be provided for an IAATO-approved Observer by the operator.
3. **Probationary Members** are current or past Full or Provisional Members who have not fully complied with IAATO Bylaws or who otherwise are not in good standing as decided by a two-thirds vote of the Full Members. Probationary Members must a) pledge to abide by IAATO Bylaws; b) agree to the above-mentioned categories and to not have more than 100 passengers ashore at any one site at the same time; c) maintain a staff-to-passenger ratio of 1:20 ashore, d) agree to carry either an IAATO-approved or National Antarctic Program Observer aboard for a voyage during the following season and e) to forward a complete, unabridged Observer's report to the Secretariat following the conclusion of the voyage. Reasonable compensation (such as air transportation and related expenses) would be provided for an IAATO-approved Observer by the operator.
4. **Associate Members** are other travel agents, and organizers who do not operate their own travel programs and/or individuals interested in or promoting travel to the Antarctic that wish to support IAATO objectives and whose application has been formally accepted by two-thirds of the standing members.

Section B.

To be considered as Full Members, organizers who operate travel programs to the Antarctic must have demonstrated the willingness and ability to adhere to and actively support IAATO objectives. Criteria for membership includes: the use of appropriate vessels, aircraft, and equipment; hiring a sufficient number of qualified and experienced staff; submitting advance notification, the filing of an environmental impact assessment and Post Visit Site Reports with appropriate national government and IAATO and being actively involved in the organization and operation of Antarctic tourism; and adhering to other obligations of Guidance for Visitors to the Antarctic and Guidance for Those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic, as adopted by the Antarctic Treaty System (Recommendation XVIII-1). Also, consideration will be given to the professional standing of prospective members in the travel industry and prior experience conducting responsible tourism.

Section C.

Provisional and Probationary Members are eligible to apply as Full Members having met membership criteria, e.g. having carried an IAATO-approved Observer, successfully carried out their proposed activity, filed appropriate paperwork to the Secretariat in a timely manner.

Section D.

Membership is non-transferable. In the event a member company is acquired by another entity or ceases operation, the company would have to reapply for membership.

Section E.

Members who drop their affiliation with IAATO and later wish to rejoin, must pay the initiation fee in order to be reinstated.

Section F.

Members are subject to annual membership dues and fees as agreed from year-to-year by two-thirds of Full Members in good standing.

Section G.

Members in good standing are those who continue to act in compliance with the IAATO Objectives and Bylaws and are current with IAATO dues.

Section H.

Members who do not comply with the Bylaws and/or do not pay applicable dues in a timely fashion will be subject to reprimand, change in status or expulsion after review by the membership or appointed committee.

Section I.

Associate Members are subject to the payment of annual dues as proposed and agreed by two-thirds of the Full Members in good standing. Membership applications for Associate Members are considered on a quarterly basis.

Section J.

Membership will be reviewed at the Annual Meeting, including the status of Provisional and Probationary Members.

Section K.

Applications for Provisional Membership must be received by the Executive Director at least 30 days prior to the Annual Meeting. A representative must be in attendance at the Meeting to provide details on planned activities and to respond to questions by the Membership. Applications received after this date, incomplete applications or companies not represented at the Annual Meeting may result in their membership application being deferred for the current year. Provisional or Probationary Members seeking Full Membership must also have a representative in attendance at the Annual Meeting for their status to be reviewed by the Members.

Section L.

Members are required to make sure that their charterer, wholesalers, sponsoring organizations or other parties conforms to IAATO Objectives and Bylaws, particularly that these companies distribute appropriate materials and properly inform their passengers of proper conduct ashore. Furthermore, Members are responsible for ensuring payment of any per passenger fees to IAATO for these departures.

Section M.

Use of the IAATO logo in brochures, advertisements or other promotional materials is reserved for Full and Associate Members in good standing. There are logos specific for each category of membership. Full Members may allow their sales/marketing partners to use the IAATO logo provided that use is strictly limited to those specific pages of the sales materials whereby the Full Members' product is advertised. Appropriate wording must disclose the Full Member who is the operator of the particular program. The use of the logo must be accompanied by the following wording: This program is operated by [name of Full Member inserted here] who is a Full Member in good standing of the International Association of Antarctica Tour Operators (www.iaato.org).

Section N.

New companies applying for Provisional Membership are encouraged to seek sponsorship by an already existing Full Member in order to assure that information is shared and the potential Provisional Member is well versed in IAATO procedures and philosophies. If a company is unable to find a sponsor, the Membership Committee will assist with the application or suggest a referral.

Section O.

If a member company organizes programs that fall within more than one category of membership, the company must organize, operate, manage and promote their programs in accordance with the particular category of membership in which that program falls.

Article IV: Organizational Structure**Section A.**

The Executive Director is appointed by agreement of two-thirds of the Full Members in good standing. The Executive Director reports to the Executive Committee, which acts on behalf of the Membership.

The Executive Director is a paid full-time position with benefits and insurance. Terms of office, responsibilities, time requirements and remuneration will be determined by the Executive Committee according to proposed activities and budget and agreed upon by two-thirds of the Full Members in good standing.

The Executive Director should, where possible, consult with the Executive Committee in whole or in part, in person or via conference calls, to report on issues, activities and progress, and to determine forthcoming priorities.

The Executive Director's responsibilities may include but are not limited to:

- Liaise with the Executive Committee; further standing committees and IAATO representatives as appropriate.
- Act as a resource for the IAATO membership and clearinghouse for information.
- Act as a liaison with the media, scientific and conservation communities.
- Compile and distribute IAATO information to interested parties, through an IAATO website, IAATO newsletters, occasional IAATO press releases and other publications.

- Act as treasurer, developing a yearly budget and submitting to IAATO members a status report of IAATO activities and finances.
- Make and carry out recommendations in regard to IAATO activities and finances.
- Act as IAATO representative where required.
- Develop the agenda and coordinate meetings.
- Procure part-time, paid help and provide compensation and benefits where appropriate and within the annual budget together with the Executive and Finance Committees.

Section B.

The Environmental Operations Manager is appointed by agreement of the Executive Committee. The Environmental Operations Manager reports to the Executive Director and the Executive Committee, which acts on behalf of the Membership.

The position of Environmental Operations Manager is a paid position. Terms of office, duties and responsibilities, benefits, time requirements and remuneration will be determined by the Executive Committee according to proposed activities and budget.

Section C.

Responsibilities of a designated IAATO representative may include but are not limited to:

- Represent IAATO at Antarctic Treaty Consultative Meetings and other important meetings related to the Antarctic Treaty System.
- Promote IAATO objectives in dialogue with delegates and others at such meetings, and to initiate and draft appropriate working papers and written reports distributed at meetings.
- Provide an appropriate and supportive stance in written and oral presentations at meetings.
- Participate in hearings and other venues where Antarctic tourism and protection is discussed as designated.
- Prepare documents related to the above, including submissions for publication in appropriate journals, reports and books.
- Communicate and coordinate activities to the Executive Committee and membership via the Executive Director where appropriate.
- Maintain an accurate record of activities, including time and expenses related to authorized activities to be submitted to the Executive Director for payment.

Section D.

Individuals with relevant qualifications and who are willing and able to provide guidance and advice to IAATO may be invited to sit on an advisory board and named as Associate Members without compensation as approved by two-thirds of the Full Members.

Article V:

Elections and Voting

Section A.

Elections will be held at the annual meeting.

Section B.

Full Members in good standing are eligible to vote and eligible for committee positions and other offices.

Section C.

Each qualifying Full Member will have one vote.

Section D.

Full Members in good standing who are unable to attend the Annual or any extraordinary Meetings may nominate candidates for standing committees and cast written votes on resolutions and nominations for standing committees, provided that ballots are returned to the Executive Director at least one week prior to the meeting.

Section E.

Full Members who are not in attendance at the Annual or any extraordinary Meetings forfeit their voting privileges on impromptu issues that may arise during the meetings. Full Members who are not in attendance may not nominate a person from another member company to vote on their behalf. The Executive Director will make a best effort to solicit resolutions, changes in Bylaws and other important matters before the meeting.

Section F.

Any issue voted on will pass with two-thirds vote in favor of the issue.

Section G.

A review of membership and any requested changes in Full, Provisional or Probational membership categories will be voted on at the Annual Meeting. Associate Members can be voted in quarterly.

Article VI: Standing Committees

Section A.

A three-member Executive Committee, comprised of representatives from Full Member companies, will be elected at the Annual Meeting to assist the Executive Director. The committee shall make decisions on behalf of the full membership where appropriate and subject to ratification. The make up of the committee should reflect as equally as possible the geographical representation of the membership as well as the categories of Full Membership (membership categories 1–6). Each individual shall serve for three years with one person rotating off each year. The senior member of the committee shall serve as Chair, unless otherwise voted upon by a two-thirds majority of Full Members in good standing.

Section B.

Further standing committees, as required and including Membership, Environmental & Guideline, Marine, Bylaws and Finance Committees, comprised of representatives from Full Member companies, shall be elected by a two-thirds majority of Full Members in good standing, generally at the Annual Meeting. Each committee will have a Chair. Standing Committees could meet on an as-required basis in the future. Expenses over 5,000 US Dollars need to be approved by two-thirds of the Full Members in good standing.

Article VII: Meetings

Section A.

A General Meeting (referred to as the Annual Meeting) will be held at least once a year. Extraordinary meetings may be scheduled as necessary.

Section B.

The Executive Director will coordinate the time and venue of the Annual Meeting and advise Full Members at least 60 days prior to the meeting.

Section C.

Attendance at the Annual Meeting is reserved for Members in good standing, however discussions requiring a vote may be limited to Full (voting) Members. Requests to attend by prospective members and non-members are limited to the open sessions. Membership reserves the right to invite experts or others as necessary to attend closed sessions should circumstance dictate.

Section D.

The Executive Director will appoint a person to record minutes during the Annual Meeting. The Executive Director will distribute the minutes within four months after the meeting to the membership.

Section E.

Members are required to submit agenda items for meetings 60 days prior in advance of the meeting. Any agenda item submitted after this deadline may not be able to be included.

Article VIII: Finances

Section A.

The Executive Director will solicit, collect and administer all dues and fees.

Section B.

The Executive Director together with the Executive and Finance Committees will manage finances, make payments within budget constraints and make recommendations regarding annual budget, to be approved during the Annual Meeting.

Section C.

Dues and fees are non-transferable and non-refundable. Overpayments will be credited to the Member's account.

Section D.

A detailed balance sheet and profit and loss statement will be provided to Full Members within four months of the close of the financial year. Detailed decisions on budgets and financial matters will be undertaken by the Financial Committee with presentation to the membership at the Annual Meeting for review and approval by two-thirds of the Full Members in good standing.

Section E.

Unbudgeted Purchases or expenses up to 20,000 US Dollars can be approved by the Executive and Finance Committees. Expenses over 20,000 US Dollars need to be approved by two-thirds of the Full Members in good standing.

Article IX: Amendments to IAATO Bylaws

Section A.

These Bylaws may be amended by a resolution passed by two-thirds of the Full Members in good standing.

IAATO Membership Registration Information for Provisional Membership

The following information is to be submitted to IAATO (iaato@iaato.org) at least thirty (30) days in advance of the Annual Meeting for consideration and review by the membership. Please elaborate in order to provide the necessary level of detail.

- A. Contact information for your company including the contact details for the person (s) who will be your Environmental Officer (s) dealing with all IAATO-related matters.
- B. Have you been an IAATO member previously?
- C. Number of years experience you have in operating programs in the Antarctic.
- D. Name of ships or aircraft used in previous seasons.
- E. Incidents in previous years that have resulted in significant damage to the vessel or environment.
- F. Advance Notification of planned expeditions to what appropriate authority?
- G. Name, registry and specifications of each vessel you plan to use, including the number of crew, expedition staff and the carrying capacity of each vessel/aircraft.
- H. Contact information for each vessel (call sign, phone, fax, email, MMSI, SelCall,)
- I. Number of voyages planned per vessel or aircraft and planned itineraries.
- J. Do you plan any non ship-based tours and/or plan extended time off the vessel in the Antarctic Treaty Area? If yes, please describe.
- K. Total number of passengers you expect to carry per trip in the upcoming season and five year projection.
- L. Statement of the status of compliance with environmental assessment requirements, including contingency and waste management plans.
- M. Methods of educating passengers, staff and crew of Recommendation XVIII-1 and other obligations.
- N. What are your staff positions and who is on your expedition staff? List name and Antarctic experience where possible.
- O. Signed statement that you have read the IAATO Objectives, Standard Operating Procedures, Bylaws and Membership Criteria as well as Recommendation XVIII-1 and agree to follow the same.
- P. Upon receipt of the above, your membership application will be reviewed by the membership at the Annual Meeting. If accepted for Provisional Membership, you will be invoiced for the appropriate annual dues as well as 65% of the per passenger fee based on your estimated passenger load. Payment can be remitted via wire transfer or company check in US Dollars drawn on a U.S. Bank

Source: IAATO (2008b)

Appendix 7.2: IAATO codes of conduct

The following visitor and operator codes of conduct are promoted and encouraged through IAATO:

- Guidance for those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic (Recommendation XVIII-1, adopted at the Antarctic Treaty Meeting, Kyoto, 1994)
- Guidance for Visitors to the Antarctic (Recommendation XVIII-1, adopted at the Antarctic Treaty Meeting, Kyoto, 1994)
- Marine Wildlife Watching Guidelines (Whales & Dolphins, Seals and Seabirds) for Vessel & Zodiac Operations
- Boot, Clothing and Decontamination Guidelines

The full text of these codes of conduct is available through IAATO's website: www.iaato.org.


Source: IAATO (2008c)

Appendix 8: Post-visit site report form

POST-VISIT REPORT FORM: PART 1 – Expedition Record

The Expedition Record is completed for every Expedition. This information is requested in compliance with Antarctic Treaty Recommendation XVIII-1 and Resolution XIX-3. Please submit both Part 1 and Part 2 to an appropriate national authority within three months of the activity having taken place.

A: Expedition Details

Company name:		Voyage/Flight number: Voyage Name:	
Expedition Leaders(s) name:		Vessel / aircraft name:	
Expedition is:	Ship 	based	Captain's/commander's name:
Port of Embarkation:		Port of Disembarkation:	
Date of Embarkation:		Date of Disembarkation:	
Actual itinerary traveled: please provide description of route, giving dates: (Note: If you consider that the Site Visit Record (SVR) provides an adequate description of itinerary, simply write "See SVR")			

B: Observers

Name:	Name:	Name:
Affiliation:	Affiliation:	Affiliation:

C: Record of Expedition numbers by nationality (in alphabetical order)

Nationality	Pax ¹	Staff ²	Crew ³	Nationality	Pax ¹	Staff ²	Crew ³
				Other			
				Other			
				TOTAL	0	0	0

¹ Passengers:

Members of the Expedition that are not Staff, Crew, Observers or National Representatives.

² Staff:

Expedition personnel, guides, lecturers and small boat drivers (exclude crew serving these functions).

³ Crew:

Vessels captain and officers, helicopter pilots, crew and hotel / catering staff (excluding above)

D: Report on Expedition by Expedition Leader (please be brief, but use additional sheets if necessary)

1. Has an expedition meteorological report been submitted to the World Meteorological Organization?		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
2. List any unusual incidents affecting people or the environment:		
3. If there were any unusual events, has or will an incident report be prepared:		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know
4. To whom has or will the incident report be provided?		
5. Any other comments or information (e.g. observations of disturbance to wildlife or the physical environment, changes from expedition Advance Notification, etc.)		

Signature: _____

Date: _____

Expedition Leader or Vessel Captain

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POST-VISIT REPORT FORM: PART 2 – Site Visit Record

Complete one line of the Site Visit Record wherever Expedition members disembark or journey beyond base or camp.

[View Instructions for this Page](#)

Voyage Number:

Embarkation Date:

Tour Company or Name:

Vessel
Name:

Voyage
Name:

Date(s)	Site visited	Site Latitude/Longitude		1st pax arrive shore/site (in GMT)	Last pax depart shore/site (in GMT)	Number of people making site visit					Activities at site
		Latitude	Longitude			Pax ¹	Staff ²	Crew ³	Obs ⁴	Total	Select up to three activities per Site Visit entry. Use additional lines if more than three activities occurred or if the number of passengers differs per activity.
										0	
	Other (Please Specify)									0	

¹ Pax (Passengers):

Members of the Expedition that are not Staff, Crew, Observers or National Representatives.

² Staff:

Expedition personnel, guides, lecturers and boat drivers (exclude crew serving these functions).

³ Crew:

Vessels captain and officers, helicopter pilots, and crew and hotel / catering staff (excluding above).

⁴ Obs:

Observers or National Representatives.

Activity Notes:

BAILY HEAD TO WHALERS BAY WALK is Abbreviated: BH to WB Walk

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Appendix 9: Vessels used by Antarctic tour operators in the 2007/08 season

VESSEL	Antarctic Operators	Group Owner	Ship manager	Operator	Registered Owner	Technical Manager	Classification		Class	Built	Gross Tonnage	Construction details	Flag/Registry	IMO number	Comments	Capacity (pax.)	Est. aver. pax. load	Activities	
Akademik Ioffe	Peregrine Shipping	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	RMRS	1989-02-00	KM * L1 A2	1989	6450		Russia	8507731		110	80	traditional ship-based	Zodiac; kayak; camping; climbing
Akademik Sergey Vavilov	Peregrine Shipping	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	P.P.Shirshov Institute of Oceanology, Moscow, Russia	RMRS	1988-02-00	KM*L1[1]A1	1988	6344	ice-strengthened	Russia	8507729		100	80	traditional ship-based	Zodiac; kayak; camping; climbing
Akademik Shokalskiy	Quark Expeditions	Far Eastern Research	Far Eastern Research	Far Eastern Research	Far Eastern Research	Far Eastern Research	RMRS	1982-10-00		1982	1764	ice-strengthened	Russia	8010336	Converted from research vessel	48	42	traditional ship-based	Zodiac; kayak; camping (activities vary)
Aleksey Maryshev	Oceanwide Expeditions	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	RMRS	1990-11-00		1990	1698	ice-strengthened	Russia	8909329		50	42	traditional ship-based	Zodiac; landing; scuba diving
Andrea (originally Harald Jarl)	Elegant Cruises and Tours	West Wind Ltd., Split, Croatia	West Wind Ltd., Split, Croatia	West Wind Ltd., Split, Croatia	AML Shipping Ltd., Liberia	West Wind Ltd., Split, Croatia	BV	2004-08-00	FS Ice Class 1C	1960	2549	FS Ice Class 1C	Liberia	5142657		100	90	traditional ship-based	Zodiac; landing
Antarctic Dream (originally Piloto Pardo)	Antarctic Shipping S.A.	Antarctic Shipping	AGUNSA	AGUNSA	Dreamright Investment, Panama	unknown	unknown		unknown	1959	2180	ice-strengthened	Panama	5278432		78	40	traditional ship-based	Zodiac; landing; helicopter flights
Artemis (originally Royal Princess)	P & O Carnival UK	Carnival PLC, Trading AS Cunard, Southampton, UK	P&O Cruises UK Ltd.	P&O Cruises UK Ltd.	Princess Tours, UK	P&O Cruises UK Ltd.	LR	1984-10-00	+100 A1	1984	44588	Hull: higher tensile steel	Bermuda	8201480		1650	1260	Cruise only	no landings
Azamara Journey (originally R Six)	Celebrity Cruises	Wilhelmsen A, Norway	Celebrity Cruises, Miami, USA	Celebrity Cruises, Miami, USA	Azamara Cruises Inc., Malta	unknown	BV	2001-01-00	I (Unrestricted Navigation)	2000	30277		Malta	9200940		700	700	Cruise only	no landings
Bark Europa (originally Senator Brocques (Elbe 2))	Rederij Bark Europa B.V.	Unknown	La Constance, Netherlands	La Constance, Netherlands	La Constance, Netherlands	Stichting BBZ-ISM, Netherlands	BV	1998-09-00	I Special Service/Training ship (Unrestricted Navigation)	1991	303	converted from lightship in 1994	Netherlands	8951932		38	38	traditional ship-based	Zodiac; landing
Bremen (originally Frontier Spirit)	Hapag-Lloyd Kreuzfahrten	Hapag-Lloyd AG, Germany	Hapag-Lloyd Cruiseship, Hamburg, Germany	Hapag-Lloyd Seetouristik	Hapag-Lloyd, Bahamas	Hapag-Lloyd AG, Germany	GL	2001-05-00	/+ 100A5 WITH FRBD 1,816 MERS P5D11 Passenger Ship with Cabins	1990	6752	FS Ice Class 1A Super	Bahamas	8907424		164	130	traditional ship-based	Zodiac; landing
Clipper Adventurer (originally Alla Tarasova)	Clipper Cruise Line; Quark Expeditions; Zegrahm Expeditions	International Shipping Partners, Miami, USA	International Shipping Partners, Miami, USA	Clipper Cruise Line	Adventurer Owner Ltd.	International Shipping Partners, Miami, USA	LR	1998-03-00	LR Class: 100A (Passenger ship, Ice Class 1A)	1975	4376	FS Ice Class 1A Super	Bahamas	7391422		122	110	traditional ship-based	Zodiac; landing
Corinthian II (originally Renaissance Seven)	Travel Dynamics International	International Shipping Partners, Miami, USA	International Shipping Partners, Miami, USA	Mauritius Island, Norway	Corinthian II Owner Ltd., Bahamas	International Shipping Partners, Miami, USA	BV	2006-11-00	I (Unrestricted Navigation; FS Ice Class 1C)	1991	4200	FS Ice Class 1C	Malta	8802882		114	90	traditional ship-based	Zodiac; landing
Delphin (originally Byelorussiya)	Hansa Kreuzfahrten GmbH, Germany	MTC Marine Trade Consulting, Hamburg, Germany	MTC Marine Trade Consulting, Hamburg, Germany	Hansa Kreuzfahrten GmbH, Germany	Dolphin Maritime Ltd., Malta	unknown	GL	1994-04-00	/+ 100A5 E1 P2D11 Passenger Ship with Cabins	1975	16214	FS Ice Class 1C	Bahamas	7347536		500	325	traditional ship-based	Zodiac; landing
Discovery* (originally Island Venture)	Discovery World Cruises	All Leisure Holidays Ltd., UK	V Ships Leisure S.A.M., Monaco	Voyages of Discovery Ltd., UK	Voyages of Discovery Ltd., UK	unknown	LR	1980-09-00	100 A1	1971	20216		Bermuda	7108514		650	550	traditional ship-based	Zodiac; landing

VESSEL	Antarctic Operators	Group Owner	Ship manager	Operator	Registered Owner	Technical Manager	Classification		Class	Built	Gross Tonnage	Construction details	Flag/Registry	IMO number	Comments	Capacity (pax.)	Est. aver. pax. load	Activities	
Explorer (originally Lindblad Explorer)	GAP Adventures, Canada	GAP Adventures, Canada	GAP Shipping Sweden, Sweden	GAP Adventures, Canada	GAP Shipping Co Ltd., Barbados	unknown	DNV	1980–99–00	1A1 ICE-A (for a max draught 4.20 m)	1969	2398	ice-strengthened	Liberia	6924959	total loss	108	95	traditional ship-based	Zodiac; landing
Explorer II (originally Minerva)	Abercrombie and Kent/ Atholl Shipping Corporation	Unknown (Vlasov Group?)	V Ships Leisure S.A.M., Monaco	Phoenix Reisen GmbH, Germany	Artica Adventure and Cruise Shipping, Bahamas	V Ships Leisure S.A.M., Monaco	RINA	1996–05–00		1996	12449		Bahamas	9144196		420	190 (cat. 1); 300 (cat. 2)	traditional ship-based	Zodiac; landing
Fram	Hurtigruten Group ASA	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	LR	2007–04–23	+100 A1 (pax. & vehicle ferry; Ice Class 1BS at draught not more than 5.1 m)	2007	11647	FS Ice Class 1B	Norway	9370018		320	270	traditional ship-based	Zodiac; landing
Grigoriy Mikheev	Antarctica XXI S.A.; Oceanwide Expeditions	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	Russian Govt., Hydrographic Dept.	RMRS	1990–12–00		1990	1729	ice-strengthened	Russia	8909331	Converted from research vessel	46	39	traditional ship-based; air/cruise (Antarctica XXI)	Zodiac; landing; Fly to King George Isl. (Antarctica XXI)
Hanse Explorer (originally Hanseatic Explorer)	Oceanstar GmbH	Harren & Partner Reederei GmbH, Germany	Harren & Partner Ship Management, Bremen, Germany	Harren & Partner Ship Management, Bremen, Germany	Harren & Partner Trainingship, Germany	Harren & Partner Ship Management, Bremen, Germany	GL	2006–09–00	FS Ice Class 1A	2005	885	FS Ice Class 1A	Antigua & Barbuda	9346110		12	12	traditional ship-based	Zodiac; landing
Hanseatic (originally Society Adventurer)	Hapag-Lloyd Kreuzfahrten	Unknown	Hapag-Lloyd AG, Hamburg, Germany	Hanseatic Cruises, Germany	Hapag-Lloyd AG, Hamburg, Germany	Bunnys Adventure & Cruise, Bahamas	GL	2001–05–00	/+ 100 E4 WITH FRBD 2,106 M ERS P5D11 Passenger Ship with Cabins	1991	8378	FS Ice Class 1A Super	Bahamas	9000168		184	150	traditional ship-based	Zodiac; landing
Insignia* (originally R One)	Oceania Cruises Inc	Oceania Cruises Inc, USA	V Ships Leisure S.A.M., Monaco	V Ships Leisure S.A.M., Monaco	Insignia Vessel Acquisition, USA	V Ships Leisure S.A.M., Monaco	BV	1999–00–00	I (Passenger Ship; Unrestricted Navigation)	1998	30277		Marshall Islands	9156462		800	800	Cruise only	no landings
Kapitan Khlebnikov	Quark Expeditions	FESCO, Moscow, Russia	FESCO, Moscow, Russia	FESCO, Moscow, Russia	FESCO, Moscow, Russia	FESCO, Moscow, Russia	RMRS	1981–05–00	KM*LL3A2 (45mm thick icebreaker hull)	1981	12288		Russia	7824417	converted from ice-breaker	116	90; 75 (for Ross Sea)	traditional ship-based	Zodiac; landing; helicopter flights
Le Diamant (originally Begonia)	Compagnie Des Iles Du Ponant	CMA CGM Holding, France	Compagnie Des Iles Du Ponant, Marseille, France	Compagnie Des Iles Du Ponant, Marseille, France	SNC Le Diamant, Wallis & Futuna	unknown	BV	2004–08–00	I (Passenger Ship; Unrestricted Navigation)	1974	8282	FS Ice Class II	Wallis & Futuna	7325629	converted from Ro-Ro Cargo Ship	199	160	traditional ship-based	Zodiac; landing
Lyubov Orlova	Quark Expeditions	Lubov Orlova Shipping Co Ltd., Novorossiysk, Russia	Lubov Orlova Shipping Co Ltd., Novorossiysk, Russia	Lubov Orlova Shipping Co Ltd., Novorossiysk, Russia	Lubov Orlova Shipping Co Ltd., Novorossiysk, Russia	Lubov Orlova Shipping Co Ltd., Novorossiysk, Russia	RMRS	1976–06–00		1975	4251	ice-strengthened	Malta	7391434		108	95	traditional ship-based	Zodiac; landing
Marco Polo* (originally Aleksandr Pushkin)	Orient Lines	Star Cruises, Malaysia	NCL Bahamas Ltd., Miami, USA	NCL Bahamas Ltd., Miami, USA	Story Cruise Ltd., Liberia	NCL Bahamas Ltd., Miami, USA	DNV	2001–09–00	1A1 ICE-1C Passenger Ship	1965	22080	FS Ice Class 1C	Bahamas	6417097	sold to Global Cruises as of 03/2008	800	500	traditional ship-based	Zodiac; landing
Marina Tsvetayeva	Aurora Expeditions	Sakhalin-Kurily, Russia	Sakhalin-Kurily, Russia	Sakhalin-Kurily, Russia	Sakhalin-Kurily, Russia	Polar Shipping (A/O 'Polar Shipping'), Russia	RMRS	2005–09–00		1989	4575		Russia	8509181		100	90	traditional ship-based	Zodiac; landing; helicopter flights
National Geographic Endeavour (originally Marburg)	Lindblad Expeditions	Lindblad Expeditions, Seattle, USA	Lindblad Expeditions, Seattle, USA	Lindblad Expeditions, Seattle, USA	SPEX Calstar, Cyprus	Lindblad Expeditions, Seattle, USA	DNV	1980–99–00	1A1 ICE-C Passenger Ship	1966	3132	FS Ice Class 1C	Bahamas	6611863		118	100	traditional ship-based	Zodiac; kayak; ROV
Nordnorge	Hurtigruten Group ASA	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	Hurtigruten Group ASA, Narvik, Norway	DNV	1998–00–00	1A1 ICE-1C Car Ferry A RM (–28°C/+30°C) E0 F-C NAUT-C PWDK	1997	11384	FS Ice Class 1C	Norway	9107784		350	300	traditional ship-based	Zodiac; landing
Ocean Nova (originally Sarpik Ittuk)	Quark Expeditions	International Shipping Partners, Miami, USA	International Shipping Partners, Miami, USA	International Shipping Partners, Miami, USA	Nova Cruising Ltd., Bahamas	International Shipping Partners, Miami, USA	BV	2006–11–00	I (Passenger Ship; Unrestricted Navigation; Ice Class 1D)	1992	2183	FS Ice Class 1B	Bahamas	8913916		98	75	traditional ship-based	Zodiac; landing

VESSEL	Antarctic Operators	Group Owner	Ship manager	Operator	Registered Owner	Technical Manager	Classification		Class	Built	Gross Tonnage	Construction details	Flag/Registry	IMO number	Comments	Capacity (pax.)	Est. aver. pax. load	Activities	
Orion	Orion Expedition Cruises	Helios Shipping Ltd., Moutsopoulos, Greece	Helios Shipping Ltd., Moutsopoulos, Greece	Travel Dynamics, New York, USA	Explorer Maritime, Marshall Islands	Helios Shipping Ltd., Moutsopoulos, Greece	GL	2003–11–00	/+ 100A5 E3 WITH FRBD 2,057 M P7D11 Passenger Ship with Cabins	2003	3984	FS Ice Class 1A	Bahamas	9273076		106	100	traditional ship-based	Zodiac; landing
Polaris (originally Disko)	G.A.P. Adventures	Murmansk Shipping Company, Murmansk, Russia	Murmansk Shipping Company, Murmansk, Russia	Murmansk Shipping Company, Murmansk, Russia	Murmansk Shipping Company, Murmansk, Russia	Murmansk Shipping Company, Murmansk, Russia	RMRS	2007–05–00		1968	2097	ice-strengthened	Russia	6807395	replaced the Explorer; converted from Ferry	unknown	unknown	traditional ship-based	Zodiac; landing
Polar Pioneer/ Polaryny Pioneer (originally Akademik Shuleykin)	Aurora Expeditions	Marine Service, St. Petersburg, Russia	Marine Service, St. Petersburg, Russia	Marine Service, St. Petersburg, Russia	Marine Service, St. Petersburg, Russia	Polar Expedition, St. Petersburg, Russia	RMRS	1982–07–00		1982	1753	ice-strengthened	Russia	8010324		56	50	traditional ship-based	Zodiac, scuba diving, camping, kayak, mountaineering
Polar Star (originally Njord)	Polar Star Expeditions; Cheesemans' Ecology Safaris	Karlen Shipping Company, Halifax, Canada	Karlen Shipping Company, Halifax, Canada	Polar Star Expeditions, Canada	Karlsen Shipping Norway, Norway	Karlen Shipping Company, Halifax, Canada	DNV	2000–11–00	+ 1A1 Ice 1A* Passenger Ship	1969	4998	FS Ice Class 1A Super	Barbados	6905745	converted from ice-breaker	105	85	traditional ship-based	Zodiac; landing
Prinsendam (originally Royal Viking Sun)	Holland America Line, Inc	Carnival Corp., Panama	Holland America Line Inc, Seattle, USA	Holland America Line Inc, Seattle, USA	HAL Antillen NV, Netherlands	Holland America Line Inc, Seattle, USA	LR	2002–08–00	100 A1 Passenger Ship	1998	37983		Netherlands	8700280		793	700	Cruise only	no landings
Professor Molchanov	Oceanwide Expeditions	Murmansk Administration, Murmansk, Russia	Murmansk Administration, Murmansk, Russia	Murmansk Administration, Murmansk, Russia	Murmansk Administration, Murmansk, Russia	Murmansk Administration, Murmansk, Russia	RMRS	1982–12–00	KM* L1 A1	1982	1753	ice-strengthened	Russia	8010348		52	42	traditional ship-based	Zodiac; landing
Professor Multanovskiy	Quark Expeditions; Oceanwide Expeditions	Arctic & Antarctic Research Institute, St. Petersburg, Russia	Arctic & Antarctic Research Institute, St. Petersburg, Russia	Arctic & Antarctic Research Institute, St. Petersburg, Russia	Arctic & Antarctic Research Institute, St. Petersburg, Russia	Arctic & Antarctic Research Institute, St. Petersburg, Russia	RMRS	1983–00–00	KM * UL [I] A2	1983	1753	ice-strengthened	Russia	8010362		53 (Quark); 53 (Oceanwide)	48 (Quark); 53 (Oceanwide)	traditional ship-based	Zodiac; landing; (Quark: also kayak; camping)
Rotterdam	Holland America Line, Inc	Carnival Corp., Panama	Holland America Line Inc, Seattle, USA	Holland America Line Inc, Seattle, USA	Holland America Tours, Netherlands	Holland America Line Inc, Seattle, USA	LR	1997–11–00	+100 A1 Passenger Ship	1997	59652		Netherlands	9122552		1316	1200	Cruise only	no landings
Saga Ruby (originally Vistafjord)	Saga Shipping Company Ltd	Saga Shipping Co Ltd., Bahamas	Saga Shipping Co Ltd., Bahamas	Saga Cruises Ltd., UK	Saga Shipping Co Ltd., Bahamas	Saga Shipping Co Ltd., Bahamas	DNV	1973–05–00	1A1 ICE-C Passenger Ship	1973	24492	FS Ice Class 1 C	UK	7214715		664	499	traditional ship-based	Zodiac; landing
Spirit of Adventure (originally Berlin)	Saga Shipping Company Ltd	Saga Shipping Co Ltd., Bahamas	Saga Shipping Co Ltd., Bahamas	Saga Cruises Ltd., UK	Saga Shipping Co Ltd., Bahamas	Saga Shipping Co Ltd., Bahamas	GL	1980–06–00	/+ 100A5 E1 WITH FRBD 1,700 M P4D11 Passenger Ship with Cabins	1980	9570	FS Ice Class 1 C	Bahamas	7904889		352	225	traditional ship-based	Zodiac; landing
Spirit of Enderby	Heritage Expeditions	unknown	unknown	unknown	unknown	unknown	unknown			unknown			Russia	unknown		48	48	traditional ship-based	Zodiac; landing; hovercraft
Star Princess	Princess Cruises	Carnival Corp., Panama	Princess Cruises Inc, Santa Clarita, USA	Princess Cruises Inc, Santa Clarita, USA	GP3, Liberia	unknown	LR	2007–01–27	+100 A1 Passenger Ship	2002	108977	higher tensile steel	Bermuda	9192363		3100	2600	Cruise only	no landings
Topaz (originally Empress of Britain)	Japan Grace Co Ltd./ Peaceboat	Technical Marine Planning, USA	Technical Marine Planning, Piraeus, Greece	Technical Marine Planning, Piraeus, Greece	Topaz International Shipping, Greece	Technical Marine Planning, Piraeus, Greece	LR	1956–03–00	+100 A1 Passenger Ship	1956	32327		Panama	5103924	converted from Ferry	1100	1000	Cruise only	no landings
Ushuaia (originally Researcher)	Antarpply Expeditions; Cheesemans' Ecology Safaris; Fathom Expeditions Inc.	Antarpply SA, Argentina	Ushuaia Adventure, Argentina	Ushuaia Adventure, Argentina	Ushuaia Adventure, Argentina	unknown	unknown		unknown	1970	2802		Panama	6901907		84	80	traditional ship-based	Zodiac; landing

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Vistamar	Plantours and Partner GmbH	Ellevi Shipping Srl, Italy	So Ge Vi Srl, Italy	So Ge Vi Srl, Italy	Ellevi Shipping Srl, Italy	So Ge Vi Srl, Italy	RINA	2007-06-00		1989	7478		Italy	8701193		280	260	traditional ship-based	Zodiac; landing
Yachts																			
S/V Australis	Ocean Expeditions												Australia			9	9	traditional ship-based	Zodiac; landing; kayak; climbing
S/V Golden Fleece	Golden Fleece Expeditions Ltd.												Falkland Islands			10	8	traditional ship-based	Zodiac; landing
S/V Kotick	Kotick Charters Ltd.												France			4	4	traditional ship-based	Zodiac; landing
S/V Le Sourire	Le Sourire Expeditions												unknown			unknown	unknown	traditional ship-based	Zodiac; landing
S/V Pelagic	Pelagic Expeditions												British Virgin Islands			6	6	traditional ship-based	Zodiac; landing; scuba diving; climbing
S/V Pelagic Australis	Pelagic Expeditions	Unknown	Kaiken Enterprises, Virgin Islands, UK	Kaiken Enterprises, Virgin Islands, UK	Kaiken Enterprises, Virgin Islands, UK								British Virgin Islands			10	8	traditional ship-based	Zodiac; landing; scuba diving; climbing
S/V Santa Maria Australis	Sea & Ice & Mountains Expeditions												Germany			9	8	traditional ship-based	Zodiac; landing; kayak; climbing (activities vary)
S/V Seal	Sterna Corporation												USA			6	6	traditional ship-based	Zodiac; landing
S/V Spirit of Sydney	Spirit of Sydney Adventures												Australia			8	8	traditional ship-based	Zodiac; landing
S/V Tiama	Tiama Research Expedition Charters												New Zealand			8	6	traditional ship-based	Zodiac; landing
S/V Tooluka	Tooluka Ltd												Netherlands			6	5	traditional ship-based	Zodiac; landing
S/V Xplore	Xplore Expeditions												unknown			12	8	traditional ship-based	Zodiac; landing

Note: *Non-members of IAATO; FS ice class = Finnish-Swedish ice class

Sources: Lloyd's Register (2008); IAATO (2007a)