Managing Antarctic tourism

by

Phillip John Tracey, BAppSc(Hons)

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Phillip Tracey

Date
Abstract

Antarctic tourism began before the Antarctic Treaty was signed, and is now a substantial industry exhibiting rapid growth. Concern has been expressed about the effects of tourism on scientific, environmental and other important Antarctic values. The Protocol on Environmental Protection to the Antarctic Treaty forms the main mechanism for managing Antarctic tourism within the Antarctic Treaty System (ATS). This thesis argues that despite the framework provided by the Protocol, the tourism management system is inadequate, and that the management systems governing similar forms of tourism in other natural areas provide a superior model.

The research included a comprehensive analysis of the industry and its development. Physical, environmental, operational and geographical aspects of Antarctic tourism were analysed. An examination of site use and the spatial development of tourism shows that concern about high use levels is justified for a small proportion of sites, and identifies trends in the geographic spread of tourism activity. The impacts of tourism on Antarctic values were reviewed, with the main concerns identified as low-risk, high-magnitude impacts, and cumulative impacts. Social, economic, and industrial aspects of tourism were analysed. The economic analysis shows the market economic value of the industry to be approximately fifty five million US dollars for the 1996/97 season. A forecast of the development of Antarctic tourism predicts continued growth, increasing diversification, and development of substantial new markets.

The management of Antarctic tourism was examined in detail. The system includes tourism management within the ATS, measures imposed from outside the ATS, and industry self regulation. An analysis of the legislative and administrative approaches of different nations shows that there is considerable variation in the way that tourism management provisions of the Protocol are interpreted and applied.

Detailed case studies were conducted on the management of tourism at southern oceanic islands and northern polar locations. The case studies show that cruise tourism is managed very differently in these areas than in the Antarctic, with management planning regarded as the most appropriate model for management. Management measures specific to cruise tourism in high latitude locations were identified.

It is argued that there are significant shortcomings in the tourism management system, based on analysis of the existing system, the characteristics of the industry and the Antarctic environment, management planning theory, and the standards set by management of similar activities in the case study areas.

An alternative model for the management of Antarctic tourism using a management planning approach is proposed, taking into account the case studies, industry analysis and forecast, and the structure and implementation of the present system. The thesis argues that this alternative is suitable for application within the framework of the ATS, and that it would overcome the shortcomings identified in the existing management system.
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## Acronyms and abbreviations

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<tr>
<td>AAT</td>
<td>Australian Antarctic Territory</td>
</tr>
<tr>
<td>AEPS</td>
<td>Arctic Environmental Protection Strategy</td>
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<tr>
<td>AIRSS</td>
<td>Arctic Ice Regime Shipping Standards (Canada)</td>
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<td>AMAP</td>
<td>Arctic Monitoring and Assessment Programme</td>
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<tr>
<td>ANARE</td>
<td>Australian National Antarctic Research Expeditions</td>
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<tr>
<td>ANI</td>
<td>Adventure Network International</td>
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<tr>
<td>ANLICA</td>
<td>Alaskan National Interest Lands Conservation Act</td>
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<tr>
<td>ASAC</td>
<td>Antarctic Science Advisory Committee (Australia)</td>
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<tr>
<td>ASMA</td>
<td>Antarctic Specially Managed Area</td>
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<tr>
<td>ASOC</td>
<td>Antarctic and Southern Ocean Coalition</td>
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<tr>
<td>ASPA</td>
<td>Antarctic Specially Protected Area</td>
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<tr>
<td>ASPPR</td>
<td>Arctic Shipping Pollution Prevention Regulations</td>
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<tr>
<td>ASTI</td>
<td>Area of Special Tourist Interest</td>
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<tr>
<td>ATCM</td>
<td>Antarctic Treaty Consultative Meeting</td>
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<tr>
<td>ATCP</td>
<td>Antarctic Treaty Consultative Party</td>
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<tr>
<td>ATP</td>
<td>Antarctic Treaty Party</td>
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<tr>
<td>ATS</td>
<td>Antarctic Treaty System</td>
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<tr>
<td>BAS</td>
<td>British Antarctic Survey</td>
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<tr>
<td>CC</td>
<td>Carrying Capacity</td>
</tr>
<tr>
<td>CCAMLR</td>
<td>Convention on the Conservation of Antarctic Marine Living Resources</td>
</tr>
<tr>
<td>CCGN</td>
<td>Northern Region Canadian Coast Guard</td>
</tr>
<tr>
<td>CEE</td>
<td>Comprehensive Environmental Evaluation</td>
</tr>
<tr>
<td>CEMP</td>
<td>CCAMLR Ecosystem Monitoring Program</td>
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<tr>
<td>CEP</td>
<td>Committee for Environmental Protection (of the ATS)</td>
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<tr>
<td>CITES</td>
<td>Convention on International Trade in Endangered Species of Wild Flora and Fauna</td>
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<tr>
<td>CLIA</td>
<td>Cruise Line International Association</td>
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<tr>
<td>CMS</td>
<td>Conservation Management Strategy</td>
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<tr>
<td>COMNAP</td>
<td>Council of Managers of National Antarctic Programs</td>
</tr>
<tr>
<td>CRAMRA</td>
<td>Convention for the Regulation of Antarctic Mineral Resource Activities</td>
</tr>
<tr>
<td>DPWH</td>
<td>Department of Parks, Wildlife and Heritage (Tasmania)</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EPA</td>
<td>Environmental Protection Agency, US</td>
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<tr>
<td>FACH</td>
<td>Fuerza Aérea de Chile</td>
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<tr>
<td>GNWT</td>
<td>Government of the Northwest Territories</td>
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<tr>
<td>HRSCERA</td>
<td>House of Representatives Standing Committee on Environment, Recreation and the Arts (Australia)</td>
</tr>
<tr>
<td>IAATO</td>
<td>International Association of Antarctica Tour Operators</td>
</tr>
<tr>
<td>IACS</td>
<td>International Association of Classification Societies</td>
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<td>ICAIR</td>
<td>International Centre for Antarctic Information and Research</td>
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<tr>
<td>IEE</td>
<td>Initial Environmental Evaluation</td>
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<tr>
<td>IMO</td>
<td>International Maritime Organisation</td>
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<td>IP</td>
<td>Information Paper (of the ATCM)</td>
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<tr>
<td>IRB</td>
<td>Inflatable Rubber Boat</td>
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<tr>
<td>IUCN</td>
<td>International Union for the Conservation of Nature and Natural Resources (World Conservation Union)</td>
</tr>
<tr>
<td>IWC</td>
<td>International Whaling Commission</td>
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<tr>
<td>LAC</td>
<td>Limits of Acceptable Change (management system)</td>
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MARPOL 73/78  The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978
MBO  Management By Objectives
MPA  Multiple-use Planning Area
NERC  National Environment Research Council (UK)
NGO  Non-governmental Organisation
NMFS  National Marine Fisheries Service (US)
NORDREG  Arctic Traffic System (Canadian Coast Guard)
NPI  Norwegian Polar Institute
NPS  National Park Service (US)
NSF  National Science Foundation (US)
NWT  Northwest Territories
PAC  Project Antarctic Conservation
PATA  Pacific Asia Travel Association
PEE  Preliminary Environmental Evaluation
PERM  Preliminary Environmental Review Memorandum
Polar Code  International Code of Safety for Ships in Polar Waters
Protocol  Protocol on Environmental Protection to the Antarctic Treaty
Rec.  Recommendation (of the ATCM)
ROS  Recreation Opportunity Spectrum
SCALOP  Standing Committee on Antarctic Logistics and Operations (of COMNAP)
SCAR  Scientific Committee on Antarctic Research
SCUBA  Self-contained Underwater Breathing Apparatus
SGSSI  South Georgia and the South Sandwich Islands
SOLAS  International Convention for the Safety of Life at Sea, 1974
SOPEP  Shipboard Oil Pollution Emergency Plan
SPA  Specially Protected Area
SPRI  Scott Polar Research Institute (UK)
SRA  Specially Reserved Area
SSSI  Site of Special Scientific Interest
TANGO  Tourism and Non-Governmental Operations (working group of COMNAP)
TAP  The Antarctica Project
Treaty  Antarctic Treaty of 1959
UKAHT  UK Antarctic Heritage Trust
UN  United Nations
USFWS  US Fish and Wildlife Service
VAMP  Visitor Activity Management Process
VERP  Visitor Experience and Resource Protection Framework
VIM  Visitor Impact Management process
VMP  Vessel Management Plan
WCWC  World Conservation Monitoring Centre
WP  Working Paper (of the ATCM)
WTO  World Tourism Organisation
WWF  World Wide Fund for Nature, also known as World Wildlife Fund