

## **Cold plunge: Management implications of diverse Antarctic tourist experiences**

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Since the mid-1980s, the annual number of people visiting Antarctica for tourism purposes has increased rapidly from a few hundred to over 45.000 in 2008 (Enzenbacher, 1993; IAATO, 2008b). Antarctic tourism has also become more diverse. Tourism operations are largely ship-based, with a much smaller number of tourists travelling to Antarctica by air. The traditional expedition-cruises, involving small to medium-sized ships, rubber boat landings and educational programmes, have been complemented with large cruise liners making no landings, overflights, fly-sail operations, as well as some land-based tourism using aircraft for transportation. In expedition cruises and land-based itineraries, an increasing range of adventurous activities are offered, including helicopter excursions, camping, kayaking, scuba diving, mountain climbing, and cross-country skiing (Stonehouse and Crosbie, 1995; Bastmeijer and Roura, 2004). A shift has been noted from location-based tourism (i.e. with focus on wildlife and historic sites), to activity-based tourism (i.e. with focus on activities) (ASOC, 2008). In other words, the experiences provided to tourists is becoming further diversified. In many cases these diverse experiences have to be managed in the frame of a single ship.

The diversification of Antarctic tourism into industry segments, modes of transport, and activity forms has been criticised by those who claim that new activities may pose safety risks, erosion of intrinsic Antarctic wilderness values (e.g. Antarctica becoming a playground) and even strategic judicial challenges in the longer term. The case of high-risk adventure tourism (United Kingdom, 2004b), the use of existing scientific facilities for tourism, or the development of permanent land-based tourism infrastructures (New Zealand and Australia, 2006) are examples of developments that might pose such challenges. State-supported tourism can create conflicts of interest between science and tourism operations for the state concerned; aggravate underlying sovereignty claims of claimant states; and make it harder for ATCPs to reach consensus on regulation (ASOC, 2008). In addition, activities may also not be compatible with intrinsic Antarctic values, such as wilderness values (Australia, 2005).

Tourism is formally regulated by the Antarctic Treaty System (ATS), a group of countries with Antarctic scientific programmes that collectively manages activities in this region. The 1991 Protocol on Environmental Protection to the Antarctic Treaty ('the Environmental Protocol') provides the main regulatory framework that applies to all human activities, including tourism. A range of gaps, inconsistencies and weaknesses has been identified with regard to the regulation of tourism operations. Tourism policies have typically been ad hoc and reactive, targeting individual expeditions rather than clusters of activities, focusing on requirements rather than restrictions, and often responding to incidents and plans (Kriwoken & Rootes, 2000; Hemmings & Roura, 2003; Bastmeijer & Roura, 2004).

In addition, tour operators in Antarctica have managed to maintain a relatively strong record on safety and environmental sensitivities. The establishment of the International Association of Antarctica Tour Operators (IAATO) in 1991 is believed to have played a major role in this (Splettstoesser, 2000; Splettstoesser, et al. 2004; United Kingdom, 2004). There is generally no funding available for onsite management, monitoring and enforcement, despite the fact that the Antarctic is designated as a nature reserve (Snyder, 2007). These important tasks are now largely left for the tourism industry to cover. The value of IAATOs work in coordination and environmental management underlines the importance of a continuing co-operation between the ATS and IAATO (United Kingdom, 2004a). However, the ATCPs have a clear responsibility under the ATS and sustainability challenges may not be adequately addressed by self-regulation alone. It is not clear how the ATS should formally and informally relate to self-regulatory organisations like IAATO. The paper will discuss the implications of the tourist experience for Antarctic tourism governance and visitor management.

Smaller scale niche markets may develop offering adventure tourism activities or special interest activities, such as scuba diving. If new forms of tourism entail negative impacts for Antarctic ecosystems or wilderness values is uncertain and cause for concern. For example, it is suggested in the literature that different types of activities might bring tourists and tour operators that are not as dedicated to the ecological integrity of the Antarctic as the present ones. This observation is also found in the literature (Hummel, 1994), and highlights the potential need for future visitor management (Page, 2003). In this article we intend to analyse this hypothesis.

This paper will employ a two-way strategy for analysing this relation between diversity of experience and management implications of different tourist experiences in Antarctica. First, the paper presents the results of an extensive literature review regarding the topic, related to both Antarctic and non-Antarctic tourism. Various theories will be presented to point out differences in experiences in the Antarctic context, such as the theory of planned behaviour, or expectancy-value model (Ajzen, 1991), visitor typologies (Cohen, 1979; Grenier, 2000), the flow theory (Csikszentmihalyi, 1975), the needs theory (Maslow, 1971). Second, this paper will present the results of a survey conducted during a scuba diving - tourist cruise in the Antarctic Peninsula Region, in March 2009. During this cruise, diving and non-diving tourists were asked to fill in three questionnaires regarding their experiences, the first immediately after embarking the ship, the second after a full day of activities in Antarctica, the third just before disembarking. The aim of the survey was to see if there are major differences in the way tourists to Antarctica undertaking different types of activities experience the environment and impact during a multi purpose trip.