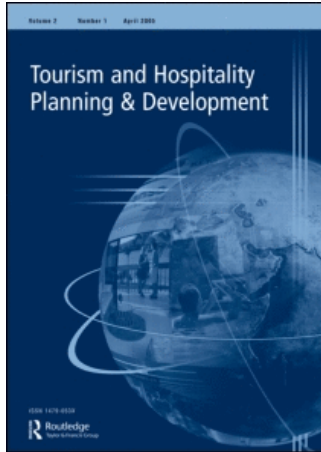


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Visitor management in protected areas of the periphery:

Polar perspectives

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# Visitor Management in Protected Areas of the Periphery: Polar Perspectives

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**ABSTRACT** *Visitor management, traditionally, has been concerned largely with visitor impacts and emphasis has been placed on managing negative consequences of tourism. This has involved controlling visitor numbers, attempting to modify visitor behaviour and also modifying the resource. These approaches can be divided into 'hard' and 'soft' categories (Kuo, 2002). 'Hard' visitor management approaches involve physical management, regulatory management and economic management. 'Soft' approaches make use of education and interpretation. While the approach of managing impacts has its merits, it has tended to assume that negative impacts are inevitable. This approach has tended to ignore the role of visitor experience in relation to visitor management. This article discusses a number of 'hard' and 'soft' approaches to visitor management, focusing specifically on interpretation and self-regulation, using codes of conduct. These approaches are examined within the context of protected natural areas in Antarctica and the Arctic Region. These two remote regions, which until recently have not been significantly exploited for tourism development, share geographical similarities, particularly in terms of climate and environment and have large areas of protected landscape, although their human geography is different. Comparisons are made between the various visitor management approaches deployed in these peripheral regions at opposite ends of the earth and the article also provides a critical evaluation of codes of conduct and interpretation.*

## Introduction

Managing visitors is one of the important ways of attempting to control the impacts of tourism, particularly impacts on the environment, but additionally socio-cultural and economic impacts. Visitor management has been viewed, in the past 20 years or so, as a significant way to reduce the negative impacts of tourism (Pearce, 1989; Hall and McArthur, 1996; Mason, 2003a). A common approach has been through attempts to divert tourists from the so-called 'honey pots', which are areas with large volumes of tourists. Another approach has been to minimize the negative impacts at a popular site by 'hardening' (e.g. resurfacing paths and footpaths). However, there is a danger here, in that, by attempting to improve the site, this only encourages more visitors who in turn cause more damage (Swarbrooke, 1999).

These introductory statements indicate that visitor management has been used predominantly as a way to regulate visitors. Regulation has frequently involved attempts to prevent

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(or in certain instances allow) access to particular areas or sites. In most cases, regulations relating to tourism are unlikely to be backed up by laws and are far more likely to be voluntary and of a self-regulatory nature (Mason and Mowforth, 1996). Self-regulation frequently involves the use of codes of conduct, which may be accompanied by guidelines. However, as well as regulation, managing visitors can also involve education. Education frequently involves the process of interpretation (Mason, 2003a). This educational process may involve the dissemination of information about a particular site, but is also likely to involve more general education about social and environmental factors. In certain situations, a combination of education and regulation has been used in an attempt to manage visitors.

This article discusses visitor management within the context of protected areas. Two specific regions of the world, Antarctica and the Arctic, provide the actual geographic focus for this discussion. Both areas can lay claim to the title 'last wilderness on earth' – meaning that they are both very much at the periphery of tourism development and yet contain significant areas of land with protected area status. As tourism continues its apparently inexorable growth in terms of both increases in volume of visitors and demand for access to more remote locations, both the Arctic and Antarctica are finding themselves subject to greater pressure for tourism exploitation. The two regions share certain similarities in terms of their physical geography, particularly climate and environment, which enables useful comparisons to be made between them. In addition, tourism management in the Arctic has benefited from experiences gained of managing visitors in Antarctica. Nevertheless there are significant differences, both in physical and human terms, between the regions and these also feature in the discussion (for a summary of similarities and differences see Table 4).

The article does not offer new empirical data but discusses and critically evaluates literature and concepts concerned with tourism planning and management in both of the polar regions, in an attempt to draw comparisons between the two, particularly in terms how events and circumstances in one can influence the other and valid lessons can be learned.

The article initially discusses visitor management, and, as this is contextualized within protected areas, the nature of these areas is then discussed. The specific focus of the article is on protected areas of the polar regions, and the environment of each region, with associated tourism activities and visitor management approaches, is then presented. The penultimate section of the article raises several issues concerning visitor management in polar regions, prior to concluding comments.

### **Visitor Management**

Visitor management has been used by a number of different agencies and organizations, on different scales and in a variety of locations. In some countries it has become a major tool in an attempting to control visitor flows. For example, in the early 1990s in the UK, in response to mounting concern about real and potential damage to environmental resources, a government task force produced a tourism report that had visitor management as a key strategy. This report *Maintaining the Balance*, produced jointly by the UK Ministry of Environment, the Department of Employment and the English Tourist Board (ETB), and published in 1991, focused on the relationship between the environment and the visitor and suggested there were three main ways of managing visitors:

- controlling the number of visitors – by limiting numbers to match capacity or spreading them throughout the year

- adapting the resource in ways to enable it to cope with the volume of visitors, and hence become less damaged
- modifying visitor behaviour.

(ETB, 1991)

Hall and McArthur (1996) suggested a set of approaches to managing visitors similar to that set out in the ETB report. They indicated that attempting to modify visitor behaviour, usually via regulation, is common in many areas of the world. As they argued, a major aim of modifying visitor behaviour is to limit the actual number of visitors to a site. In extreme cases, there may be complete restriction of access (Hall and McArthur, 1996). Shackley (2001) concurred with the views of the ETB (1991) and Hall and McArthur (1996) on these aims of visitor management.

When discussing the control of visitor numbers, the ETB report (1991) suggested that the initial task is to determine the carrying capacity. The report then cited the following threshold levels at which the character of a place is damaged and the quality of the experience is threatened. These are as follows:

- a level above which physical damage occurs
- a level above which irreversible damage occurs
- a level above which the local community suffers unacceptable side effects.

Coccosis (2004) indicated the value of carrying capacity as a concept when arguing that it can be used in policy-making, and in relation to visitor management could be the basis for making decisions about the particular control measures to be employed.

The ETB report (1991) also made suggestions on modifying/adapting the resource as a part of the process of visitor management. It indicated that this approach acknowledges there will be some wear and tear of the tourism resource. Minimizing damage through adaptation of the resource is the key aim of this approach. The ETB report suggested the following approaches:

- the use of wardens, guides and even guards to watch over and/or supervise (this is to prevent unruly behaviour, theft or deliberate damage)
- restricting the use of the site (by, e.g., cordoning off areas, to prevent access, allow re-growth)
- protective measures (e.g. reinforcement of footpaths)
- the building of replicas.

Hall and McArthur (1996) also suggested that modifying the resource is a common visitor management approach. They suggested 'hardening' of the site is particularly popular, and the purpose of hardening is to limit the damage done to the tourism resource. Hence, hardening would fit within the ETB approaches under the heading of 'protective measures'.

The two major approaches of 'adapting the resource' and 'attempting to control visitor numbers' have been inspired largely by the perceived need to limit damage to environmental resources. This approach of minimizing damage to the resource would appear to be at the heart of most visitor management during the last two decades and would seem to have evolved largely in response to the effects of mass tourism, where visitors have been conceived of as one almost entirely homogeneous group and considered as being 'guilty until proven innocent' (Mason 2003b). Hence, in relation to mass tourism, it has been assumed that tourists either knowingly (or unwittingly) will have damaging effects

on environmental resources (Mason, 2002). Almost certainly, this view has gained credence as the numbers involved in mass tourism rose rapidly in the 1980s and 1990s. Much writing and research in the 1980s and 1990s also supported this belief in the damaging effects of mass tourism on the environment (see, for example, Krippendorf, 1987; Pearce, 1989; Mason, 1990; Burns and Holden 1995; Swarbrooke, 1999). It perhaps is unsurprising, therefore, that, particularly in natural resource-based environments, visitor management strategies have tended to start from the premise that visitors will inevitably damage the very thing they come to experience.

As a consequence of this view, many authors have produced lists of the effects tourists can have on the environment and most of these indicate that the negative consequences are prevalent and serious (Mason, 2002). Shackley (2001) has produced a particularly interesting list as it not only shows the negative impacts but also indicates the processes (in Shackley's diagram referred to as 'agents of change') that have led to the effects. Shackley's list of negative impacts of visitors is shown in Table 1.

Both the approaches discussed so far (that of attempting to control visitor numbers and that of modifying the tourism resource) are primarily regulatory. However, as the ETB (1991) report indicated, and has also been argued by others, including Hall and McArthur (1996) and Shackley (2001), there are different ways to manage visitors. The ETB (1991) report made a number of suggestions on 'modifying visitor behaviour'. These are as follows:

- marketing and general information provision
- promotion to bring visitors out of season, to help spread the load
- promotion of alternative destinations
- niche marketing, to attract particular types of visitor
- providing visitors with specific information
- the use of signs, travel information centres and information points/boards
- the use of codes of conduct to enable a combination of education and regulation in the interpretation process.

The ETB suggestions make reference to marketing and promotion, the provision of information, the use of signs, codes of conduct and interpretation. All of these activities, either directly or indirectly, involve processes of educating visitors. Therefore, unlike the predominantly regulatory approaches of controlling visitor numbers and modifying the tourism resource, the approach of attempting to modify visitor behaviour is largely educational (Mason, 2002).

**Table 1.** Negative physical impacts of visitors

Agent of change	Physical impact
Theft of artefacts	Loss of resource
Vandalism/graffiti	Damage to resource
Accidental damage	Wear and tear
Pollution (fouling)	Damage to resource
Pollution (noise)	May undermine fabric
Pollution (litter)	Reduced attractiveness
Microclimate change	Fabric damage
Crowding	Leads to physical damage

*Source:* Based on Shackley (2001).

Kuo (2002) discussed tourism management at environmentally sensitive sites and provided a useful summary of the approaches to visitor management that can be applied to protected-area visitor management. Kuo created two major categories of visitor management and termed these ‘hard’ and ‘soft’ approaches. As Table 2 shows, ‘hard’ management strategies involve various forms of management: economic, physical and regulatory, which in summary can be stated to be ‘regulatory’. Kuo’s ‘soft’ approaches to visitor management all make reference to interpretation and in a wider sense each can be viewed as involving educational processes.

*The Use of Interpretation in Visitor Management*

One of the earliest commentators on interpretation was Tilden (1957) and he suggested that it is an educational process that employs objects, media and the use of first-hand experience. The aim of interpretation, Tilden claimed, is to reveal meaning and relationships. Prentice defined interpretation in the following way:

a process of communicating to people the significance of a place so that they can enjoy it more, understand its importance and develop a positive attitude to conservation. Interpretation is used to enhance the enjoyment of place, to convey symbolic meaning and to facilitate attitudinal or behavioural change.

(Prentice, 1995, p. 55)

Interpretation can therefore be seen as part of the process of making places accessible to a public audience and providing visitors with insight. The more specific aims of an interpretation programme, it has been argued, are ‘to stimulate, facilitate and extend people’s understanding of place, so that empathy towards conservation, heritage, culture and landscape is developed’ (Stewart *et al.*, 1998, p. 257). As Stewart *et al.* indicated, a major aim of interpretation is to stimulate interest and develop understanding in visitors. Orams (1994, 1995) went further when he suggested that interpretation programmes are usually designed not just to inform, but to change visitors’ behaviour.

It has been argued that visitors can respond to interpretation in two major ways. Moscardo (1996) suggested that visitors have two modes of response for dealing with new social situations: ‘mindless’ or ‘mindful’. A ‘mindless’ state is characterized by

**Table 2.** ‘Hard’ and ‘soft’ visitor management strategies

‘Hard’ approaches	‘Soft’ approaches
<i>Physical management</i> e.g. use of fences, resource hardening, limits to size of car parks	<i>Directorial interpretative information</i> e.g. signs, information on visitor safety
<i>Regulatory management</i> e.g. protecting wildlife, reducing traffic congestion, regulating operation of site (such as opening times), use of security staff, implementing rules/regulations	<i>Behavioural interpretative information</i> e.g. guidelines, visitor codes of conduct
<i>Economic management</i> e.g. charging high entrance fees, charging car parking fees, fines for littering and other misbehaviour	<i>Educational interpretative information</i> e.g. guidebooks, tour guides, maps, targeting niche groups

Source: Based on Kuo (2002).

mental passivity and behaviour, while 'mindful' means a state marked by active mental processing (Moscardo and Pearce, 1986, Moscardo, 1996). Moscardo (1996) argued the importance of promoting 'mindful' tourism through interpretation programmes.

Interpretation can be delivered via a number of different modes and in different formats, including books, maps and signs. It can involve the written word, but also the spoken word, where tour guides can have a major role in the interpretation process (Weiler and Hamm, 2001).

### *The Use of Tourism Codes in Visitor Management*

The use of tourism codes of conduct is a relatively recent phenomenon, with the first significant codes appearing in the 1960s (Mason and Mowforth, 1995). It is perhaps not surprising that tourism codes first began to emerge at this time, when mass tourism was growing, the supposed benefits of tourism were being questioned and a more critical perspective on its impacts was being adopted (see Jafari, 1981; Fennell, 1999).

From the late 1980s, codes were developed by governments, the private sector and concerned individuals, as well as by non-government organizations (NGOs). The main aims of these codes are to influence attitudes and modify behaviour (Mason and Mowforth, 1996). Codes are usually part of a wider process involving attempts to regulate tourism and are often used in conjunction with guidelines.

A number of discrete target groups for tourism codes have been identified. These groups are as follows: visitors, the tourism industry and members of host communities (UNEP, 1995; Mason and Mowforth, 1996). The most significant target audience in terms of sheer number of codes is the visitor. Visitor codes are usually location specific. In many parts of the world, particularly the USA and Canada, visitor codes tend to be tourism-sector specific and/or 'single focus' (Wight, 2004). Whale watching, particularly significant in both polar regions, is an example of a 'single focus' tourism activity involving the use of visitor codes. By the early twenty-first century, there were many whale-watching codes in existence and they were aimed at visitors at specific locations. As Garrod and Fennell (2004) reported, one of the major aspects of this proliferation is the high degree of variability between codes in terms of message and approach, which may limit their effectiveness. This issue is discussed in more detail later in the article.

A number of codes have been designed for those directly involved in the tourist industry and there are also codes prepared for the use of host populations. In addition to a variety of target audiences for codes of conduct there are a range of different authors. Hence, many codes have been written by concerned individuals and NGOs. However, government bodies and the tourism industry itself have not been, until recently, very active in producing codes (Mason and Mowforth, 1996).

Despite their apparent intention, codes frequently fail to specify either their broad aims or more specific objectives (Mason, 1994). Nevertheless UNEP, having conducted a survey of voluntary environmental tourism codes was able to deduce a number of specific objectives (UNEP, 1995). UNEP produced, in summary form, five objectives of such codes, which are as follows:

- to serve as a catalyst for dialogue between government and other bodies involved in tourism
- to create an awareness in government and industry of the need for sound environmental management
- to heighten awareness amongst tourists of the need for appropriate behaviour

- to make host populations aware of the need for environmental protection
- to encourage co-operation between government agencies, host communities, industry and NGOs.

(UNEP, 1995, p. 8)

It would appear from the UNEP summary of the aims of tourism codes that they are primarily concerned with environmental impacts and improving environmental management; however, the message of tourism codes is not just confined to environmental issues. A number of visitor codes, for example, make reference to socio-cultural matters, such as respect for local religious beliefs and, by the late 1990s, the inclusion of socio-cultural aspects had become the norm (Mason *et al.*, 2000). Codes with industry as the audience frequently refer to the need for appropriate training and honest marketing of tourism products (Mason and Mowforth, 1996). In that they provide information, advice and frequently instructions, it should be clear that, in their attempt to regulate, codes also aim to educate.

The next section of the article discusses the origin and nature of protected areas and this provides the context for the discussion of visitor management in the polar regions. The section after that considers the environments of the two polar regions, and indicates the nature of tourist attractions and activities in each. How visitors are managed in protected areas of each polar region is then discussed.

### Protected Areas

Protected areas have been established in a number of locations around the world. Governments at national, but also at local, regional and even international level are the key driving force behind the establishment of protected areas. The major rationale for the setting up of such areas is to prevent the decline of the natural resource to enable it to continue to realize economic benefits (Holden, 2000). Hence preventing or minimizing negative impacts of tourism (and also other human activities) is a key factor in the establishment of protected areas. Therefore, it is possible to state that protected areas have been established to protect the environments of specific areas from the development of certain types of human activity. However, there are very few areas of the world that lack any form of human activity. Hence, in reality, protected areas range from those permitting a range of activities to those restricting almost all forms of activity (WTO, 1992). Holden (2000) provided a summary of these various protected areas in a table, in which the most restrictive in terms of human usage are at the top, and the least restrictive at the bottom. These protected areas are shown in Table 3. For some of the protected areas shown in Table 3, tourism is significant as it may benefit from protection to the environment and/or may actually make a positive economic contribution to environmental protection (Holden, 2000).

By the early 1990s, approximately 5 per cent of the earth's surface had protected area status and over 130 countries had designated such areas (WTO, 1992). Probably the most important type of protected area in terms of tourism use is the national park and this type is found in many countries around the world. National parks have been established with the major aim of preventing over-development of natural areas and in order to provide access for recreationists and tourists (Holden, 2000).

The original national parks were created around the turn of the twentieth century, with the very first in the USA, at Yosemite in 1890. Others followed in the UK and mainland parts of Europe in the early part of the twentieth century. It is no coincidence that parks were created in developed countries at a time of rising population and increased



**Table 3.** Protected areas (based on the 1992 WTO classification)

Protected area	Features
Scientific reserve/strict nature reserve	To maintain and protect existing balance.
National park	To protect natural and scenic areas for educational, scientific and recreational use. Generally extractive industries are not permitted.
Natural monument/landmark	Protection and preservation of nationally significant natural features.
Managed nature reserve/wildlife sanctuary	To ensure protection of nationally significant species/biota/landscape, human manipulation is permitted.
Protected landscape	Protection of landscape which is characteristic of harmonious interaction of humans and nature. Recreation and tourism permitted.
Resource reserve	To protect or sustain resources by prohibiting development/activities that threaten them.
Naturally biotic area/anthropological reserve	To permit the way of life for societies living in harmony with environment to continue.
Multiple-use management area/managed resource	The area to be used for mix of water, timber, wildlife, pasture and outdoor recreation. Nature conservation is oriented towards economic activities.

Source: Adapted from Holden (2000).

urbanization and consequent mounting pressure on countryside/rural areas (Holden, 2000). Attempting to balance competing land uses, including tourism, at a time of increased demand for access, with nature conservation has been a major issue in many national parks in the developed world during the twentieth century.

### Tourism in the Polar Regions

The Antarctic and Arctic are not only peripheral in terms of their geographical location, but, partly as a result of this, are on the extreme fringes of modern tourism development. Being at opposite ends of the earth, in terms of latitude, they exhibit similar physical features. This is particularly so in terms of climate: winters are long and summers short, both have periods of 24 hours daylight and 24 hours darkness during any one year. The harsh climate has contributed to similar physical geographical features in each region and has affected the bio-geographical aspects in terms of plant and animal life. However, the environment of each region does differ, mainly because Antarctica is a huge land mass surrounded by ocean, while the core of the Arctic is water, surrounded by land. Nevertheless the landscapes of Antarctica and the Arctic region exhibit many similarities, and large areas of each have protected area status. The environment of each region is a major draw for visitors, both areas attract similar types of tourist (Bauer, 2001) and visitor numbers to each have increased in the past 15 years. Tourists to each region are also engaged in similar types of activity, hence the impacts are similar. However, the history of human settlement and environmental usage, as well as the political geography of each of the regions, is very different. The unusual political circumstances in Antarctica where no one country owns land and hence sovereignty is not a major issue, combined with the unique management regime of the Antarctic Treaty System, have meant that managing tourism there has been viewed as a model that can be applied elsewhere. This model has been viewed as particularly appropriate to the Arctic, the region with the greatest physical similarities to Antarctica (Bauer, 2001).

## Antarctica

Antarctica is one of the last tourism frontiers. It is the remoteness of the continent combined with a unique environment that attracts some tourists (and deters others). Although the extreme climate means terrestrial ecosystems are limited, the waters around Antarctica are rich in wildlife. Polar explorers reached the South Pole only in the early twentieth century. Subsequently the isolation and extreme climatic conditions deterred continuous settlement until the second half of the twentieth century. Antarctica has a unique history, and is unlike anywhere on earth, in not being sovereign territory – it has several claimants to parts of its territory but is not owned by any one country. The continent is the only one devoted to scientific activity and only a limited amount of commercial activity is allowed, with mining and other extractive industries prohibited. Hence, at the turn of the century tourism was the only commercial use of the Antarctic environment allowed (Bauer, 2001).

The unusual political circumstances on the continent have led to a unique management system known as the Antarctica Treaty System (ATS), in which the legal status of all land and resources is subject to the Antarctic Treaty (AT) (Hall and Johnston, 1995). Politically, Antarctica is a neutral demilitarized territory subject to the AT, which, at the end of the twentieth century, had been signed by over 40 countries with interests on the continent (Mason and Legg, 1999). The AT, created in 1961, designated the Antarctic as an area to be used for peaceful purposes only, where military activities were prohibited, and gave prominence to the freedom of scientific research (Hall, 1992). The AT was created to ensure that no one single country has the right to declare any of part of the virtually uninhabited continent as its own. This unique status, in effect, means that Antarctica is the most protected area on earth.

However Antarctica has been subjected to a number of conflicts since the creation of the AT, with seven countries (the UK, New Zealand, the USA, Australia, Chile, Argentina and Norway) establishing territorial claims (Prosser, 1995). The main instrument within the ATS for resolving territorial disputes, that have a bearing on tourism activities, is the Madrid Protocol – a part of the Environmental Protection Strategy for Antarctica – but this was only finally signed by all signatory countries in 1998 (Mason and Legg, 1999). With its unusual and unique status, during the last two decades of the twentieth century Antarctica came to have a very strong symbolic value recognized well beyond the continent itself. It symbolized (and continues to do so) the conflict between development and preservation, between the agencies of ‘progress’ and the opposing agencies of ‘conservation’ (Mason and Legg, 1999). The willingness (or unwillingness) of humans to pull back from the destruction of the Antarctic wilderness was seen as the test case of human desire and ability to avert destruction globally (Broady, 1991).

### *Tourism in Antarctica*

A major motivation of tourists is to achieve the feeling of ‘otherness’ (MacCannell, 1976; Ryan, 1991). This can be otherness of culture, otherness of climate or otherness of place. Antarctica, probably more than anywhere else on earth, represents this sense of otherness, particularly otherness of place (Mason and Legg, 1999). The remoteness and isolation of Antarctica appear to make it particularly suitable for visitors to escape from their normal routine into otherness. However, Antarctica has much to attract tourists. The abundance of wildlife in the coastal margins, their habitats, and the natural beauty of the setting form a major motivating factor for tourists. Hence visitors come to see wildlife, particularly penguins – perhaps the symbol of the South Polar region (Hall and Johnston, 1995) – as well

as whales and other marine animal and bird species. They also come to see the landscapes of ice and snow.

However, it is not just the natural world that attracts visitors to Antarctica; a key motivational factor is to see the human heritage. In particular, the huts of well-known polar explorers such as Scott, Shackleton and Mawson draw tourists. In addition, other heritage sites including scientific stations, such as that at Scott Base, have become attractions. Given the focus of most of the activity on the continent is scientific exploration, the actual work conducted by Antarctic scientists, and ability to see it action and meet the scientists themselves, has become a significant tourist motivational factor. Tourism to Antarctica is highly seasonal, concentrated in time within the short austral summer, and it is also very much spatially focused. There were about 70 regularly visited tourism sites at the turn of the twenty-first century, almost all in the 2 per cent of the continent that is ice-free in the summer (Bauer, 2001) and over 90 per cent of visits have traditionally been to the area known as the Antarctic Peninsula, where most of the heritage sites and penguin colonies are located (Stonehouse and Crosbie, 1995).

### *Visitor Management in Antarctica*

Antarctica provides evidence that the approach of self-regulation combined with interpretation is a particularly appropriate visitor management strategy. Here, self-regulation is in the form of codes of conduct, for both visitors and operators, and it is the main approach to visitor management. This is coupled with interpretation, which is provided in a number of forms, including written material, although tour guides also play a very important role.

Antarctica is the one part of the earth where tourism is a major economic activity and almost all other forms of commercial activity are prevented. Until the late 1990s, tourism operations were managed almost entirely through self-regulation. This was largely possible because of the relatively small number of tourists – approximately 10,000 per annum throughout the 1990s (Bauer, 2001) – and the arrangements between the tour operators who manage visits to the continent. Almost all visiting tourists until the late 1990s reached Antarctica by cruise ship and hence were relatively easy to manage.

Tourists first came to Antarctica in significant numbers in the 1960s (Hall, 1992). One of the first operators to bring tourists was Lars-Eric Lindblad (Mason and Legg, 1999). Lindblad instilled a strong environmental ethic in the visitors he brought (Stonehouse and Crosbie, 1995) and this contributed to the practices adopted by the cruise-ship staff who subsequently led visits to Antarctica. In 1991, the cruise-ship operators joined together to form the International Association of Antarctic Tour Operators (IAATO). IAATO created an operator code of conduct for their own members and also devised visitor guidelines and visitor codes of conduct. The Lindblad approach, on which IAATO based its various guidelines, involves preparatory lectures aboard ship by those with extensive experience of Antarctica prior to arrival (Mason and Legg, 1999). At these initial sessions, passengers receive copies of the guidelines and codes of conduct as well as AT recommendations on tourism on the continent. The visitor code of conduct makes reference to potential and actual impacts on the environment, as well as plant and animal species, cultural heritage sites (primarily the huts of Antarctica explorers) and tourist safety. The guidelines accompanying the code provide the rationale for the specific instructions in the code.

As part of the Lindblad approach, tourists are taken by inflatable boat, in groups of 10–15, from their cruise ship and landed on shore and accompanied by a guide. Although free to wander, partly for safety reasons, tourists are required to stay close to the

embarkation point. Any transgression, of codes of conduct/guidelines, is met with an on-the-spot admonishment by the guide, and tourists can be sent back to the cruise ship. Debriefing sessions are held back on board ship and, as well as discussions concerning any issues and problems, these usually involve attempts to reinforce the environmental ethic.

The Lindblad approach has been employed in relation to visitor management for over 40 years, but in 1998 the Madrid Protocol was finally ratified by all relevant signatories. This document is concerned with environmental protection of Antarctica and is likely to have significant impacts for the conduct of commercial tourism on the continent (Bauer, 2001), particularly as any activity that has more than a 'minor or transitory impact' will be subject to the need to conduct an environmental evaluation prior to its commencement. In the early part of the twenty-first century, several tourist companies had undergone this process prior to being granted permission to use the Antarctic environment for tourism purposes (Bauer, 2001). However the Lindblad approach and IAATO guidelines continue to influence day-to-day tour operations on the continent.

### **The Arctic Region**

The Arctic has been variously defined, but there is no single universally accepted definition (Sage, 1986). A commonly accepted approach is to use the tree line, a visible boundary which is based on climate and soil, to distinguish the Arctic from the sub-Arctic region. North of the tree line is the treeless or semi-treeless tundra, which, for many people, is the true Arctic. The region north of the tree line has similarities with the physical/climatic features of the Antarctic. The existence of permafrost, a product of the climate is important in definitions in Siberia and Canada (Sage 1986). In Alaska and Europe, the Arctic Circle tends to be used as the boundary of the Arctic Region (Johnston, 1995). In an attempt to classify areas at risk and gain protected area status, definitions combining climate and biogeographical data were first used in the early 1990s (CAFF, 1994). However, as Johnston (1995) pointed out, all definitions of the Arctic are culturally and historically based constructs. One significant construct, used in tourism marketing of the Arctic, is 'the land of the midnight sun' (Mason, 1997). However Iceland, considered by most to be Arctic, and a member of the government body for the region, the Arctic Council, is almost completely south of the Arctic Circle, and also much of Alaska is sub-Arctic.

Nevertheless, the Arctic is perceived by tourists in a very similar way to visitors' views of Antarctica. The major appeal of the Arctic is that is regarded by tourists as a vast wilderness. Allied to this is the concept of the environment as clean and unsullied by human activity (Johnston, 1995). Combining the tourist perception of a wilderness with that of an area almost devoid of population means that it is viewed as a region offering great scope for recreation, adventure and enjoyment. Like the Antarctic, the Arctic is viewed as being metaphorically as well as literally at the end of the earth and hence distant from the hectic urban existences of many visitors, where they can escape, unwind and reflect on their life (Viken, 1993). Lopez (1986) echoes this view when indicating that the Arctic is a place to retreat from alienated Western lifestyles and Johnston (1995) argued that the Arctic, like Antarctica, carries mystic symbolism and it encourages contemplation about humans, the earth and the universe.

Unlike in Antarctica, there are indigenous people in the Arctic and they act as major draws for tourists. Indigenous people are themselves attractions for tourists, as are their artefacts and the manifestations of their activity, such as the reindeer herding of the Sami people (Mason, 1997). The indigenous people are usually viewed by tourists as living in harmony with the environment of the region, which supports the appeal of the region as a tourist attraction (Mason, 1994).

*Tourism in the Arctic*

The Arctic is huge area and, as with Antarctica, tourism tends to be concentrated in specific locations and regions, with the most accessible places having larger numbers of visitors. At the end of the twentieth century, Canada's Yukon and Northwest Territories and Iceland were important for Arctic tourism, but northern Scandinavia with over half a million visitors annually was the single most important region (Mason *et al.*, 2000). In the early part of the twenty-first century, it appears that northern Scandinavia continues to be the most important area, but coastal Greenland and Siberia are recording increases in visitor numbers (Viken, pers. comm. 2005).

Although some forms of tourist activity in the Arctic are similar to those in Antarctica, such as observing and photographing the scenery and wildlife, other types are far more consumptive of resources, including hunting and fishing. Snow-based activities, such as skiing are also particularly significant in mountain and high latitude areas of the Arctic. In sub-Arctic areas of, for example Canada, Alaska, northern Scandinavia and Iceland, hiking and walking are popular tourist activities in the short summer period.

As tourist activities are somewhat different in the Arctic from in Antarctica, then impacts also tend to vary. The scale of tourism, although not approaching that occurring in areas affected by mass tourism, is at a far higher level than in Antarctica. Cumulative damage caused by wheeled and tracked vehicles is significant, particularly in areas where spring and summer snow melt expose fragile vegetation (Mason, 1997). For example, on the Norwegian island of Svalbard there have been calls to limit the expansion of tourist numbers because of alleged damage caused by the unregulated use of snow-scooters (Viken, 1995). Tourist litter and other waste had become a significant problem in the last decade of the twentieth century, particularly in parts of Arctic Canada and Alaska (Johnston and Madunic, 1995).

The problem of commoditization of indigenous cultures, in which tourists view members of host populations in the same way that they view wildlife, as a commodity to be consumed, has been reported in the Arctic (Hall, 1987; Mason, 1997). As tourism has expanded in the Arctic, in some locations, not only has a bastardized, inauthentic, pseudo-culture been created for tourist consumption, but this has tended to be controlled by non-indigenous groups, which has limited the potential economic gain that could be derived by indigenous Arctic communities (Mason, 1997). By the early twenty-first century, commoditization of culture was being reported in such diverse Arctic locations as Arctic Canada, northern Norway and Siberia (Viken *et al.*, 2005).

*Visitor Management in the Arctic*

Unlike in Antarctica, there is no one set of regulations relating to tourism activities in the Arctic, although a general code for visitors to the region has been proposed (see Mason, 1994). Instead, individual countries, regions and localities have their own forms of regulations that pertain to tourism. In many areas, laws are aimed at local populations and are not targeted specifically at visitors, but they have a bearing on tourist activities (Mason, 1997). However, some regions have developed laws, regulations or guidelines. The Northwest Territories and Yukon in Canada have regulations relating to hunting as well as access to and protection of designated sites of environmental and or heritage value (Hall and Johnston, 1995). In the 1990s, in the Northwest Territories visitors to national parks were required to register and take part in a visitor orientation programme which involves interpretation and developing awareness of regulations, codes of conducts and guidelines (Hall and Johnston, 1995).

In some parts of the Arctic there is concern about the impacts of expeditions. Ellesmere Island is a particularly popular starting place for expeditions to the North Pole. In the early 1990s, the Canadian government published *A Guide for Expeditions to Northern and Arctic Canada*, which acted as a form of visitor code in that it not only gave information and practical advice, but brought together all legislation relating to wildlife and environmental protection (Johnston, 1993).

The location in the Arctic that probably can claim to have regulations that amount to the level of comprehensibility and strictness of those in use in Antarctica is the Norwegian archipelago of Svalbard. Here the landscape is very similar to that of Antarctica and the Norwegian Ministries of the Environment and Justice have created regulations, targeted at visitors, that aim to protect the environment and historical remains of the islands. These regulations, which have been in existence since 1983, indicate the following: conditions under which vehicles can and cannot be used; the need to remove litter; how not to disturb wildlife; and advice on how not to damage fragile vegetation (Viken, 1995).

However, in many protected areas of the Arctic there may be little in the way of attempts to manage visitors directly, with large parts of Siberia, for example, lacking any form of tourism regulations, visitor codes or guidelines. Nevertheless, in some Arctic locations, not only has attention been paid to tourists but thought has also been given to providing information and advice to related players in tourism. For example, in 1995, the Finnish Tourist Board produced guidelines targeted at the tourism industry. These guidelines were an attempt to promote sustainable tourism, and made reference to the need to include environmental viewpoints in planning, the need to recognize the importance of local communities, the need to make use of local skills, services and products and the need for the honest marketing of tourist products (UNEP, 1995). At approximately the same time, the Swedish Environmental Protection Agency, working in collaboration with the World Wide Fund for Nature (Sweden), produced guidelines for the tourism industry, which not only contained very similar statements to those produced by the Finnish Tourist Board, but suggested that tour operators should employ an environmental officer, educate visitors and attempt to ensure that tourism benefits the local economy of tourism destinations (Widstrand, 1995).

## Discussion

A number of comparisons have been made between Antarctica and the Arctic region in earlier sections. As this discussion section also makes a number of comparative statements about the two regions, similarities and differences are summarized in Table 4. This provides information on the tourism management regimes operating in each of the regions and this discussion section concentrates on this topic, with particular attention given to visitor management.

As has been indicated above, Antarctica is unique in that it is not owned by any one country, is the continent dedicated to science, is managed through the ATS, has almost no permanent resident population and is almost in its entirety designated as a protected area. It is also the one part of the earth where tourism is the major economic activity, as almost all other forms of commercial activity are prevented.

Until the late 1990s, tourism operations were managed almost entirely through self-regulation, prior to the final country signing the Madrid Protocol. In terms of visitor management in Antarctica, this has involved largely the use of IAATO codes of conduct supported by interpretation provided by the IAATO tour guides who accompany visitors. According to Stonehouse and Crosbie (1995), this approach appears to have been a successful way of managing tourists to Antarctic for at least 25 years. However, this may

**Table 4.** Comparative aspects of tourism within Antarctica and the Arctic region in the early twenty-first century

Antarctica	The Arctic region
Extremely harsh climate	Harsh climate, but relatively mild summers except Greenland and Canadian High Arctic
Extremely sensitive physical environment	Extremely sensitive physical environment
Disputed sovereignty over land and sea areas	Relatively clear sovereignty over land areas
Conservation operates under international management regime and almost entire continent has protected area status	Conservation operates primarily under a national management regime, including designation of national park areas
No indigenous peoples	Indigenous peoples seeking economic and political self-determination.
Tourist access extremely difficult, sea and air only	Tourist access is difficult, but available by land sea and air. Northern regions of North America and Europe have well established air routes and good sub-Arctic land routes
Range of tourists from relatively passive sightseers to recreational expeditions to Pole or traversing continent. Greater proportion cruise-ship based and passive*	Range of tourists from passive sightseers to recreational expeditions to Pole or other challenges. Greater proportion activity-based*
Cultural tourism relates to historic sites and current scientific/government use	Cultural tourism relates to historic sites and current scientific/government, living aboriginal culture, archaeological sites and current industry uses
Tourism operates under Madrid Protocol, signed by all signatories only in 1998*	Tourism subject to national and regional legislative control, except in disputed international waters
Tourism used as a means of reinforcing territorial claims	Tourism used as a means of reinforcing territorial claims
Visitor management primarily through IAATO operator and visitor codes*	Visitor management through various national and regional agencies, no single approach and little co-ordination or monitoring*

*Source:* Based on Hall and Johnston (1995), with more recent additions asterisked.

be to do with the relatively small number of visitors and the fact that the great majority arrive under the supervision of IAATO cruise-ship staff. It also seems likely that many Antarctic tourists are very well informed prior to arrival, are aware of the likely consequences of their behaviour on the continent and, although there is no hard evidence to support this, leave Antarctica as 'ambassadors' for the unique environment (Mason and Legg, 1999). In this way, they would appear not only to develop a conservation ethic that they subsequently apply to other protected areas, but also to inspire responsible behaviour in future Antarctic tourists.

It has been suggested that to be effective codes of codes should be targeted at different user groups in the same location and should be used together (Valentine, 1992; Mason and Mowforth, 1996). Antarctica provides a very good example of how codes targeted at different audiences can be used together in an attempt to manage visitors. Here, codes for both visitors and operators have been used at the same time. It is the unusual political and economic circumstances on the continent that enable a much clearer picture of the use and effectiveness of tourism codes than in most other parts of the world.

This example of 'soft' management (Kuo, 2002) through self-regulation used in Antarctica also reveals the links between regulation and education in tourism management.

The codes and accompanying guidelines not only provide instructions on appropriate behaviour in Antarctica (the self-regulation component), but also provide a rationale for the instructions in the codes (the education component). Whether this form of self-regulation can continue to be successful in the face of an overall growth of tourist numbers to Antarctica, increasing ship size and increasing diversity of language groups from the early twenty-first century onwards, remains to be seen.

Interpretation is the other form of 'soft' visitor management employed in Antarctica. This takes place via preliminary discussions aboard cruise ships prior to shore visits as well as in post-visit debriefing sessions. While on shore, IAATO tour guides act as the major agents of interpretation. Combined with codes of conduct, this form of 'soft' management seems to have worked for many years in Antarctica. However, as only a limited amount of research has been conducted into its effectiveness, it is not clear how successful interpretation, as a part of visitor management, can be. Stewart *et al.* (1998) indicated that, of the few evaluation studies of interpretation that exist, effectiveness is usually determined by how much factual information visitors can recall. Such studies, however, provide little idea, they argued, of how people use interpretation to help them *understand* places they are visiting. In making the same criticism of the lack of evaluation of interpretation programmes as Stewart *et al.*, Orams (1994, 1995) emphasized that such programmes are usually designed not just to inform, but to change visitors' behaviour. However, Orams (1994) added that there is little evidence to indicate that interpretation programmes will necessarily lead to a change in the behaviour of visitors.

Orams (1995) suggested that evaluation of interpretation programmes would be necessary to ascertain any changes in behaviour and advocated the use of 'cognitive dissonance' as a way to get visitors to modify their behaviour. He argued that cognitive dissonance can be used in interpretative programmes to challenge people's belief systems (Orams, 1994). The theory of cognitive dissonance was developed by Festinger (1957), and the central concepts are dissonance, consonance and irrelevance. Festinger indicated that the existence of dissonance is psychologically uncomfortable and hence will motivate individuals to reduce it in an attempt to achieve consonance. The use of cognitive dissonance in interpretation, Orams (1995) suggested, would be an attempt to throw people off balance and put questions in their minds. This use of 'shock tactics' would be a way to get visitors to modify their behaviour. In addition, Orams (1994) proposed that the eliciting of emotional responses from visitors, as part of a strategy involving cognitive dissonance, may be the way to counter the problems inherent in educating tourists.

Experiences gained from managing tourism in Antarctica have been used in creating management strategies and tools for the Arctic region. For example, the generic visitor code for the Arctic, proposed by Mason (1994), drew on both the content and format of the IAATO codes. Government and non-government agencies in a variety of countries, including Norway, Finland, Sweden and Canada, have also been influenced by the principles underlying the codes and guidelines developed by IAATO, when creating regulations for their specific audiences.

A particularly good example of the experience gained in Antarctic visitor management being applied to the Arctic context can be seen in the World Wide Fund (WWF) for Nature (Arctic) Arctic Tourism Project (Mason *et al.*, 2000). The WWF Arctic Tourism Project was established in February 1995 and has as its key aim to link tourism and conservation. Over a period of three years, several project meetings took place involving tour operators, national and local government officials, local community representatives, NGO staff, Arctic scientists, Arctic tourism experts and also delegates with Antarctic experience. At these meetings, through a process of negotiation and consensus building, tools for managing Arctic tourism were devised. The key tools were codes of conduct, supported



by guidelines. The final version of these appeared in 1997. They were published in a document by WWF Arctic that contained ten principles for Arctic tourism. These are as follows:

- Make tourism and conservation compatible
- Support the preservation of wilderness and biodiversity
- Use natural resources in a sustainable way
- Minimise consumption, waste and pollution
- Respect local cultures
- Respect historic and scientific sites
- Communities should benefit from tourism
- Trained staff are the way to responsible tourism
- Tourism should be educational
- Follow safety rules.

(WWF Arctic, 1997)

The principles for Arctic tourism were accompanied by detailed guidelines. The document in which the principles appeared also contained a code of conduct for Arctic tourists and a separate code for Arctic tour operators (WWF Arctic, 1997). However, each of these codes was linked very closely to the ten principles. The document containing the principles and Arctic tourism codes was subsequently distributed to more than 5,000 user groups, government bodies, NGOs and local communities in the Arctic (Mason *et al.*, 2000). Between 2000 and 2004 a number of pilot projects were established in a variety of Arctic locations, including Arctic Canada, Alaska, northern Finland and Svalbard, to trial the tourism codes. This an attempt not only to investigate how they might function in a real context, but also to monitor how various indigenous groups react to such codes. At the time of writing these pilot projects had just ended, but results from them have not yet been published.

Managing tourism, and by implication managing visitors, in the Arctic is potentially more complex than the same process in Antarctica. The region is sovereign territory with eight countries having at least a part of their land area in the Arctic, as well as other countries having interests and involvement in international sea areas of the region. Therefore, different parts of the Arctic are subject to different jurisdictions, with a variety of national, regional and local laws and regulations. Unlike Antarctica there is no international treaty which prevents commercial exploitation of the Arctic. In the past, oil, and other minerals on land, and whales and other marine species have been highly sought-after resources. Tourism is often viewed as a preferable option for development, being considered far less consumptive than these exploitative activities (Mason, 1997). The region has also had more strategic and military importance, historically, than Antarctica – until the early 1990s the Arctic was often the focus of Cold War hostility between the old USSR and the USA. The Arctic is also far more accessible, both geographically and from the perspective of an individual's travel budget than Antarctica. Consequently, tourist numbers to the Arctic have been growing fairly rapidly in the last 10 to 15 years. As a result, there has been mounting concern about visitor impacts in the Arctic and the need for appropriate and effective visitor management.

Although agencies in the Arctic have drawn on experiences of visitor management in Antarctica, the different factors at play in the Arctic could contribute to less effective visitor management than in the southern continent. Antarctica is certainly remote and has no police force to monitor tourism management problems, but to date it has had

relatively few tourists and, until the late 1990s, IAATO acted as the key regulatory force. The Arctic is also a vast remote region, but one where tourism management is subject to individual country's jurisdiction. This may contribute to the problem of a proliferation of codes (see Mason and Mowforth, 1996). Hence, more than one code may exist in a particular location aimed at, for example, visitors; each code may have a different author and each contain a different message. This is likely to lead to, at best, confusion and the strong possibility that the codes will be ignored. The way to resolve this would be through co-ordination of the design and implementation of codes. However, the ability to achieve this when codes have different authors and are largely voluntary initiatives is limited (Mason and Mowforth, 1996).

Tourist numbers are growing far more rapidly in the Arctic than Antarctica. Nevertheless, by global mass tourism standards, the Arctic is relatively un-exploited and there are still areas little affected by tourism. Hence, the desire to gain economic benefit from tourism, like most other global locations, is strong in the Arctic. This could be good news for economically depressed or undeveloped Arctic communities. However it could also lead to questionable practices.

It may be very tempting for tour operators, working hand in hand with local communities, to gain a competitive edge by promoting specific Arctic destinations as offering tourism experiences that are environmentally and socio-economically sustainable. Operators may be able to claim that they adhere to a particular operator code of conduct and provide tourists with a visitor code based on similar principles as a way of giving evidence to support their product (see Mason, 1997). However, this may be little more than an operator/local community ruse to sell more holidays, which the concerned customer believes are more sustainable than other products, but are in fact potentially very damaging, as more such products are sold as a result of the promotional efforts than others. Without monitoring of the use of codes of conduct, or some form of externally imposed regulation, this type of abuse could well occur (Mason and Mowforth, 1996). Such 'green-washing' (see Mason, forthcoming) is not uncommon in other global locations, so there is no reason to suspect it will not happen in the Arctic.

However, even if Arctic tour operators do act ethically and responsibly in terms of the products they sell, and communities do indeed genuinely employ sustainable practices and offer what they regard as sustainable tourism experiences, there is still an issue concerning visitors. There is no single police force in the Arctic to monitor visitor behaviour, and, even if there were such a force, it would act as little more than a deterrent, as the area is so large that most behaviour would remain unobserved. If it was possible to monitor, little of the behaviour of tourists would be illegal anyway, as there are few laws relating to tourism and visitor regulations remain largely voluntary.

Under the current political and economic conditions in the Arctic, those involved in the management of visitors in protected areas such as national parks have to rely largely on tour operators acting ethically and honestly and tourists responding positively to advice and instructions contained in codes of conducts and information provided via interpretation. In the absence of external regulations or a monitoring force, those concerned with Arctic tourism management find themselves relying on tried and tested tools deployed in Antarctica, but where the scale of tourism activity is far larger, the impacts of tourism more significant and the rise in visitor numbers far higher.

## **Conclusions**

This article has discussed and evaluated differing visitor management approaches in relation to protected areas. These can be categorized as 'hard' and 'soft' approaches

(Kuo, 2002). Traditionally 'hard' approaches involving some form of external regulation, often 'borrowed' from approaches applied to managing mass tourism destinations, have been prevalent and to some extent they have been successful. However, Shackley (1998) suggested a major problem of 'hard' visitor management approaches is that policing and enforcing any regulations will always be a problem. This article has indicated that enforcement will be particularly difficult in more remote areas, such as Antarctica and the Arctic region.

In particular two 'soft' approaches to visitor management have been discussed. Both of these place emphasis on the visitor experience, rather than on tourists' impacts. Interpretation has been presented as an educational process that involves not only the transfer of knowledge, but also the development of values in relation to the environment and culture of the site visited (Prentice, 1995; Stewart *et al.*, 1998). Interpretation can be used to transform visitors' thinking and behaviour, with the intention that they become 'mindful' tourists (Moscardo, 1996). However, this article has indicated that little is known of the effectiveness of interpretation, as it has only rarely been evaluated.

The other 'soft' approach discussed in the article is that of self-regulation. Through the use of IAATO codes of conduct and guidelines for both operators and visitors, it has been argued that Antarctica has a particularly effective form of self-regulation of visitors. The Lindblad approach to the management of cruise-ship based tourists in Antarctica also reveals the close link between interpretation and self-regulation and suggests that each involves processes of education. Experiences gained from the use of codes of conduct in the Antarctic have been used to develop codes for the Arctic. However, despite a number of similarities in both the physical and human geography of each of the polar regions, conditions in the Arctic are not identical to those in Antarctica. Nevertheless attempts have been made to develop and put into practice codes of conduct and guidelines for tourism and, as has been suggested here, the WWF Arctic Tourism Project is a particularly good example of this.

In the early part of the twenty-first century, it appears that, globally, visitor numbers are continuing to grow. In addition to mass tourism destinations, there is also increasing pressure on protected areas, including those in both Antarctica and the Arctic region. In spite of this growth, there is still a lack of accurate data about the precise impacts of tourism at sites that attract visitors (Shackley, 1998). If little is known about impacts of tourism in protected areas, even less is known about the effectiveness of visitor management strategies, whether these are classified as 'hard' or 'soft'. Hence, there is a real and immediate need to conduct research into both 'hard' and 'soft' approaches to visitor management, not just to assess their comparative effectiveness, but also to ensure the long-term sustainability of the earth's protected areas.

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