



# **Opportunities and problems associated with the development of arctic tourism - a case study from Svalbard**

**A report prepared for the Arctic Environmental  
Protection Strategy (AEPS)  
Task Force on Sustainable Development and Utilization**

**DN-notat 1996-1**



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Abstract: The case study of tourism management in Svalbard was executed in 1995 to support the Arctic Environmental Protection Strategy (AEPS) Task Force on Sustainable Development and Utilization. Increased tourism creates a number of issues for the tourism industry as well as the public management sector. The study describes recreational patterns, the tourism industry with their products, plans and strategies as well as management efforts to deal with changes in tourism activities. The experiences so far indicates that an overall management framework is necessary in order to achieve long term strategies and policy. Recommendations and principles for sustainable development of tourism are discussed.		



## Preface

The Arctic Environmental Protection Strategy (AEPS) was adopted by Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States through a Ministerial Declaration at Rovaniemi, Finland, in 1991. The AEPS presently consists of four programs (Arctic Monitoring and Assessment Program (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Emergency Prevention, Preparedness and Response (EPPR) and Protection of the Arctic Marine Environment (PAME)) and one Task Force on Sustainable Development and Utilisation (TFSDU).

The Task Force on Sustainable Development and Utilisation was established at the AEPS Ministerial Meeting in Nuuk in 1993. The goal of the Task Force is «to propose steps governments should take to meet their commitments to sustainable development in the Arctic».

In keeping with the objectives of the AEPS and of the mandate of the Task Force, a number of case studies on sustainable renewable resource use have been undertaken by the Task Force. Based on these case studies, working papers have been developed, focusing on various management, planning and development activities.

At the meeting of Task Force on Sustainable Development and Utilisation in Yellowknife, Canada, in August 1994, Norway offered to conduct a case study on opportunities and problems with the development of Arctic tourism, and to use Svalbard as an example in this regard. The working paper prepared on the basis of this case study is contained in this report.

The working papers were discussed at the third meeting of the Task Force, in Toronto, Canada in November 1995. Furthermore, the working papers will be taken note of by the AEPS Ministerial Meeting in Inuvik, Canada in March 1996. As a result of this particular study, the Ministers will undertake to see that national programs promoting Arctic tourism addresses environmental impact concerns

The overall objective of the case study has been to assess the problems, challenges and opportunities associated with the development of tourism in Svalbard. The study analyses possible consequences of tourism on these islands, analyses and evaluates the tourism on Svalbard and measures taken by Norwegian authorities to control tourism on the archipelago, looks at present trends and proposes several concrete recommendations for a sustainable tourism industry on Svalbard.

The work with the case study and the working paper has been directed by the Norwegian Directorate for Nature Management (DN). The Norwegian Ministry of the Environment has provided financial support for the project. The work with the case study and the working paper has been executed by Bjørn P. Kaltenborn (Eastern Norway Research Institute) and Reidar Hindrum (DN).

Trondheim, March 1996

Berit Lein  
Deputy Director General





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## Abstract

This report describes a case study in tourism management in the Svalbard archipelago in the Norwegian Arctic. A management plan for tourism and outdoor recreation is being implemented as a macrolevel framework to manage tourism in the islands. Svalbard has a hundred-year-old history of tourism and is part of the international web of nature tourism. The number of people visiting Svalbard is increasing and the economic importance of tourism is growing. Nature tourism is an economic opportunity for the local community at a decisive moment as coal mining is declining.

Increased tourism raises a number of issues for the tourist industry as well as for the public management sector. Protection of the wilderness qualities of the environment and creation of tourism-related jobs and income are all stated goals of the present policy. Future actions must be capable of protecting the fragile natural environment as well as creating increased revenue from tourism. Paramount questions include; on which kinds of activities should Svalbard build its future, to what extent are tourism and the hydrocarbon industry compatible, and how can one find a balance between resource use and protection which promotes a sustainable development?

This study describes recreational patterns, the tourist industry with its products, plans and strategies as well as management efforts to deal with changes in tourism. The management plan and its underlying framework are discussed. The experience so far indicates that an overall management framework is necessary to achieve long-term strategies and policies. A management plan can also function as a tool and framework for systematically implementing on-site management actions and can create an arena for co-operation between the public management sector and the private tourist industry. Recommendations and principles for sustainable development of tourism are discussed.

# 1 Background and scope

The Svalbard archipelago in the Norwegian High Arctic has served as a tourist destination for more than one hundred years. For most of this period, there have been few visitors and the effects of tourism on environmental conditions have been very limited. Despite this long and relatively peaceful history, environmental problems could increase significantly in the near future in this highly vulnerable environment. A number of factors combine to create a situation which merits attention from managers and decision-makers.

Worldwide ecotourism is on the increase. Ecotourism, nature tourism, green tourism, whatever the label, is the segment of the tourist industry which is growing most rapidly at the moment (Caballos-Lascurain 1992). Tourism to wilderness areas is estimated to have grown 20 per cent per year between 1980 and 1990 (Ashton 1991). Likewise, the adventure travel market is thought to have increased 8-10 per cent annually since the mid-1960s (Mallett 1992). A prognosis for 1996 estimates a global outcome of 230 billion US dollars from nature-based tourism (Giannecchini 1992).

Svalbard is part of this international web of tourism. Visitors are increasing, activities are diversifying, and the societal and economic importance of tourism is increasing greatly as tourism is being established as a permanent industry in the islands. The growth of nature tourism represents an economic opportunity for the local communities at a time when the only other industry in the islands, coal mining, is rapidly declining. Nature tourism is only one of the activities causing pressure on the environment. Mining, oil and gas exploration and extensive field research activities also leave their impact. The search for natural resources takes place in the ocean as well as on land.

A number of salient issues confront Svalbard as a tourist destination, a local community and a marginal arctic environment. Tourism is on the increase, yet the key attraction is unspoilt wilderness populated by only a few people. This resource must be managed consciously and carefully to maintain a product capable of bringing in revenue and to protect the ecology of the islands. Potential conflicts between those using the resource are also visible on the horizon. The interests of tourism could be threatened by new developments relating to coal, industrial minerals, oil and gas, including plans for new roads and facilities. Future development is not only a question of how to best protect the environment, or how to create a viable tourist industry. The economic base of the Norwegian communities in Svalbard depends entirely upon large annual subsidies from the Norwegian government. Thus, the paramount question is what types of activities and use of resources should Svalbard build its future upon. Tourism, nature protection and the hydrocarbon industry are compatible only to a certain point. What is a workable balance, and how can a balance be found which promotes sustainable development?

This study focuses on some of the problems and opportunities associated with development of tourism in Svalbard. The report describes the unfolding and recent implementation of a macroplan for tourism management in Svalbard. The purpose of the plan is to construct a framework where tourism can be developed within bounds set by managerial concerns, as well as providing a tool for communicating and co-operating with the tourist industry. The chief aim of this case study is to give an example of a management model which is being tried out in an arctic region. This study is broad and at the same time limited in nature. The focus is more on the main goals and the process, than on the details. Interested readers can find further material in the references listed. We try to highlight the need for co-operation between public management and the private tourist industry, and between managers and scientists in order to develop research-based management tools. We also strongly advocate the need for joint efforts between social science and natural science in a management task like this one which requires as much knowledge about social systems as it does about ecology. We try to take a critical look at the development of tourism in Svalbard and the first attempts to manage the phenomenon. Undoubtedly, there are numerous problems and pitfalls, but also some definite achievements. Although this is a case study with all its idiosyncrasies as regards the geography and ecology of the

location, use, socio-political environment and management traditions, we believe it will be of some value for efforts to manage tourism in other parts of the Arctic.

## 2 Objectives

The overall objective of this study is to assess the problems, challenges and opportunities associated with the development of tourism in Svalbard. In addition to describing experience gained from a specific management planning process, the report discusses recommendations for sustainable development of tourism in the Arctic.

Its scope includes:

- analysing and estimating patterns and trends in tourism
- describing and evaluating present initiatives, strategies and efforts by the local tourist industry
- evaluating past and present strategies by public authorities for managing tourism
- assessing actual and potential impacts of tourism on the environment
- assessing the initial effects and the more long-term potential of the management plan which is currently being implemented
- considering the need and potential for co-operation between public management authorities and the private tourist industry
- discussing and proposing recommendations for sustainable Arctic tourism.

## 3 The study area

### 3.1 The natural environment

The Svalbard archipelago comprises the islands between 74° N to 81° N and 10° E to 35° E. The total land area is 63,000 square kilometres, of which about 56 per cent is covered by glaciers. The major islands of Svalbard are Spitsbergen, Nordaustlandet, Edgeøya and Barentsøya (Fig. 1). Other smaller islands include the remote and inaccessible Kvitøya, Kong Karls Land and Hopen. Bjørnøya, some 500 kilometres south of Spitsbergen, is also part of Svalbard (Barr 1987).

The island of Spitsbergen has a dramatic topography with alpine peaks, glaciers and spectacular fjords. Few places in the world have so much of the Earth's evolution easily accessible for research. That the scenery has much to offer even the casual spectator is attested by the fact that Spitsbergen is visited by between 15,000 and 25,000 cruise ship passengers every summer.

Somewhat in contrast with the meaning of the word Svalbard - "the land with cold coasts" - the climate is relatively mild considering its northerly position. Mean temperatures are some 15-20° C higher than at comparable latitudes in the Canadian or Siberian Arctic (the mean January temperature in Longyearbyen is -16° C, and the mean July temperature is 6° C). The west coast of Spitsbergen is ice free for much of the year. In spite of the relatively mild climate the number of species of plants and animals is low compared to the Scandinavian mainland. There are approximately 205 species and subspecies of vascular plants (Rønning 1996), only 2 species of terrestrial mammals and only 1 regularly overwintering species of birds, the Svalbard ptarmigan (Løvenskiold 1963).

Productivity in the fjords and the open sea is high. When Europeans first sighted these islands in the late-16th century the sea was teeming with walrus, right whales, seals and polar bears. Whaling, hunting and wanton killing have considerably reduced the populations. For some species, such as the whale and the walrus, this proceeded almost to the point of extinction. Other species have been protected in time, and their populations have largely recovered. Examples are the Svalbard reindeer (*Rangifer tharandus platyruncus*) and the polar bear (*Ursus maritimus*). Some of the largest seabird colonies in the North Atlantic are found in Svalbard. The birds form vital links between the marine and terrestrial environments, bringing ashore enormous quantities of nutrients, some of which fertilise the soil on and beneath the bird cliffs. A paramount concern for management is that most human activity is concentrated in the vegetated areas which make up less than 10 percent of the total land area and are mainly on the coastal plain. Mining, oil and gas exploration, harbour installations and settlements, as well as historical remains, are located here. There can also be a conflict in time since humans and wildlife are both active in the short summer period. Thus, conflicting interests are focused both in time and space.

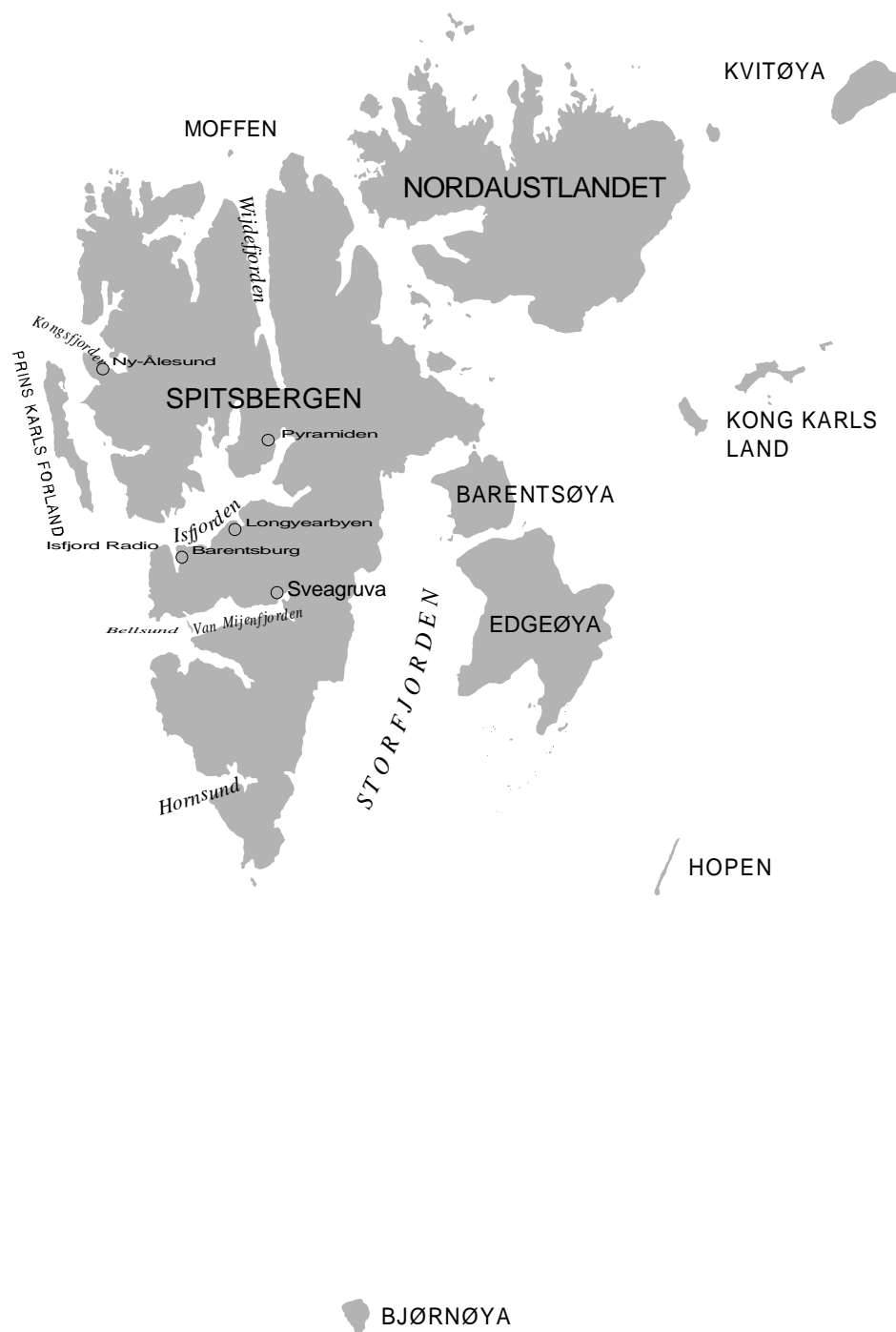


Figure 1. The archipelago of Svalbard

### ***3.2 The environment; brief description of ecological conditions and sensitivity***

Human utilisation of Svalbard and the Barents Sea, the sea surrounding the archipelago, has lasted at least 400 years. Even though there have been periods of intense resource extraction, the natural environment in Svalbard is still relatively intact and characterised by large continuous wilderness areas. Today, Svalbard forms a major part of the wilderness areas left in Europe. Except in the few small settlements in the central part of Spitsbergen, the environment has not been extensively and thoroughly impacted or changed. However, from the beginning of the human utilisation of Svalbard until the last World War, some populations of marine mammals and seabirds were over harvested and



became threatened. Except for the large baleen whales, total protection has restored the threatened populations.

The land areas of Svalbard have typical High Arctic conditions, are not very productive and have few plant and animal species. The ecosystem is characterised by short nutritional chains. Because warm Atlantic water enters the Barents Sea from the southwest, the west and north coasts of Spitsbergen are free of solid ice, and the west coast has mainly open water all year round. This creates a relatively good climate, even in the terrestrial environment, much warmer than could be expected at such high latitudes.

In the mixed zone between warm Atlantic and cold Arctic water, high primary production occurs because of excellent nutritional access in the water column and constant daylight during summer (3-4 months). The Barents Sea is actually one of the most productive in the world. This high production feeds fish, seabirds, marine mammals and polar bears. The terrestrial areas of Svalbard are closely linked to the sea by the millions of seabirds that breed on the cliffs along the coast of the archipelago and feed in the sea. This is a significant point-by-point fertilisation of most of the coastline of Svalbard. These "green points" have a very important nutritional value for certain terrestrial animals, e.g. the wild reindeer (caribou) and the ptarmigan. In addition, the seabirds are the main prey of the arctic fox.

The Arctic environment of Svalbard is robust in the sense that it is able to stand the harsh natural conditions, but it can be very vulnerable to human impact. Decomposition on land is an extremely slow process and breakdown of litter is virtually non-existent. For instance, drawing too heavily on one or a few species in the short nutritional chains can result in serious damage to the ecosystem. Vehicle tracks or other impact to the ground can easily start extensive erosion, and abnormal disturbance to animal life living at the "edge of existence" could lead to serious impact on certain populations. Human use of the environment was formerly more limited by the harsh natural conditions, and this in turn limited the human impact. Modern technology has changed this situation radically. With present-day human activities in the Arctic, thorough precautions therefore have to be taken to avoid serious environmental impact. Tourism is one of those activities. The modern tourist is capable of visiting the whole Arctic. If necessary, he can travel by aeroplane and large icebreaker.

The historical monuments in Svalbard show the relatively short history of human activity in this archipelago, a history of an activity at the edge of the possible. They are mainly traces left from utilisation of the natural resources and from scientific expeditions or voyages of discovery. The climatic conditions, a very slow decomposition rate and continuous permafrost provide perfect conditions for preserving the monuments. Svalbard therefore has historical monuments which are unique. They are also very popular targets for tourists and are affected by modern tourism.

### ***3.3 The socio-economic environment***

Despite the presence of indigenous populations throughout the Circumpolar Arctic, no indigenous groups appear to have existed in Svalbard. Scientists have not been able to say why these particular islands remained unsettled until modern times, although possible reasons may be their geographical location and isolation.

Svalbard has a long history of resource exploitation and international debates on jurisdiction. For about 300 years from the 16th to the 19th century, commercial whaling and fur trapping dominated. Coal was not found until early this century. People from several European nations, especially Dutch, British and Scandinavians, frequented the islands and established temporary settlements (Greve 1975). Svalbard was one of the last no-man's-lands on Earth to come under national jurisdiction. In 1920 an international treaty was signed in Versailles by 12 countries, giving Norway sovereign powers over the islands (today there are about 42 signatory nations). The practical implications of the treaty include

the equal rights of all the signatory countries to prospect and exploit natural resources within the limits of the treaty and the Norwegian legislation pertaining to the archipelago. It also includes the right to establish settlements as required to extract natural resources. Several nations have invested in extensive prospecting for minerals, oil and gas. Despite intervals of exploratory activity, no oil has been detected, only minor gas finds. Still, the industrial scene could change rapidly. Plans to build a road through central parts of Spitsbergen to open up new coalfields, or an oil strike either on shore or in the waters surrounding Svalbard would have dramatic effects for tourism and the environment alike.

Today, five settlements are found in Svalbard, all situated on the main island, Spitsbergen. Longyearbyen in central Spitsbergen is the main Norwegian settlement and has mining activities and the entire private and public administration. According to the population statistics given by the Governor (1/2-1995), 1170 people live in Longyearbyen. Svea, which is located somewhat further south, is a Norwegian coal mining locality where only a few people are living. Svea was earlier a small community, but today the miners commute from Longyearbyen. To the northwest, the former mining town of Ny-Ålesund is the main Norwegian research centre in Svalbard. This settlement is run by a small permanent population of Norwegians. Several other nations have also established research facilities there, some being used throughout the year and others seasonally. The Russians have established permanent communities in Barentsburg and Pyramiden in central Spitsbergen, to mine coal. The Russian population totals about 1700 people, all living in Barentsburg and Pyramiden. Only about 3000 people are resident in Svalbard, but the summer population is boosted with a large influx of tourists, scientists and various enterprises engaged in field activities. No roads or facilities exist outside the settlements, except for a Polish field research station in Hornsund, three Norwegian weather and radio-transmitting stations and five or six hunters at permanent bases.

## **4 Svalbard as a tourist destination**

### ***4.1 History and development of tourism in Svalbard***

Tourism is no newcomer to Svalbard. Organised cruises and adventure travels started about one hundred years ago. Cruise traffic began in the 1870s and apart from the war years has continued until today. Scheduled boat trips to the islands have taken place since 1890. The first hotel services came in 1896-97, but only lasted a few years. In 1938 new attempts were made, but it is only since the late-1980s that hotel services have become firmly established in Longyearbyen. Recently, accommodation has also been made available in Barentsburg and Pyramiden.

Svalbard has been important throughout the history of polar exploration as a base for expeditions towards the North Pole basin, and the first tourists rapidly followed. The first, affluent adventure travellers literally followed in the footsteps of polar explorers and scientists. The pioneering tourists were soon succeeded by organised pleasure traffic by ship to the islands. Individual tourists have slowly increased in numbers through this century, but for a long time they remained few since facilities and provisions were only accessible to the permanent residents. With the opening of a new airport in 1975 and a gradual acceptance of tourists as something other than a menace, the stage was slowly set for a growth in their numbers.

During the last decade or so both individual tourists organising their own trips and adventure travel companies have increased in Svalbard. We now find a variety of visitors on organised trips and in groups travelling without the company of a guide or the help of a commercial organisation. Today, Svalbard receives a great variety of visitors, ranging from business people on conferences in Longyearbyen to expedition members. Twenty to thirty thousand people come by cruise ship every summer, but they spend very little, if any, time ashore. A few thousand participate on guided trips in Svalbard travelling on foot or in small vessels along the coasts, seeking safe adventure through a packaged tour. Comparable groups also prepare their own trips, ranging from day hikes based in Longyearbyen, the largest settlement, to hikes, mountaineering expeditions, ski trips or kayak trips lasting up to several weeks (Kaltenborn 1991, SNU 1994).

### ***4.2 Present status of tourism: trends and patterns***

The statistical background for the study comprises data from, among others, the Governor of Svalbard, INFO-Svalbard (the information office at the Svalbard Business Company), the Spitsbergen Travel Company and the Svalbard Polar Travel Company, mostly dating from the last 5 to 10 years; some was given as personal information. These statistics could have been more stringent, but the need for such data has increased recently because of increasing interests in the tourist business. The Governor and INFO-Svalbard have therefore started to collaborate on an improved database.

The total number of tourists visiting Svalbard cannot be estimated with great precision, but the figure is thought to have been approximately 30,000 in 1994. This makes it the most visited place in the Arctic, which is not surprising in view of the relatively mild climate and its easy accessibility. Most of the tourist data indicates growth. There is a slight rise from year to year, but this trend is more evident over a period of a few years. Most tourism takes place during the summer season. However, winter tourism is becoming more popular, especially travelling by snowscooter in spring.

## Cruise tourism

Overseas cruise travellers have always formed the largest category of tourists visiting Svalbard. Today, about 80% of visitors are passengers on cruise liners, but this percentage was obviously even larger in the past (mostly compared to increasing tourism organised from Longyearbyen). This form of tourism is totally managed by foreign owners or via tourist bureaus in mainland Norway. During the last few years, companies and enterprises established in Svalbard have begun developing small-scale tourism and accommodation in Longyearbyen (the Norwegian “capital” of Svalbard). This type of tourism, mostly managed from Longyearbyen, is growing relatively fast but is still on a small scale.

All overseas cruise activity is carried out in summer. Its volume has increased more than 4 times during the last 20 years (see Figure 2). In 1994 about 24,000 tourists participated in overseas cruises to Svalbard. The increase has been relatively small from year to year and some years have even seen a decrease. It should be underlined, however, that the data collected from the companies are not very accurate.

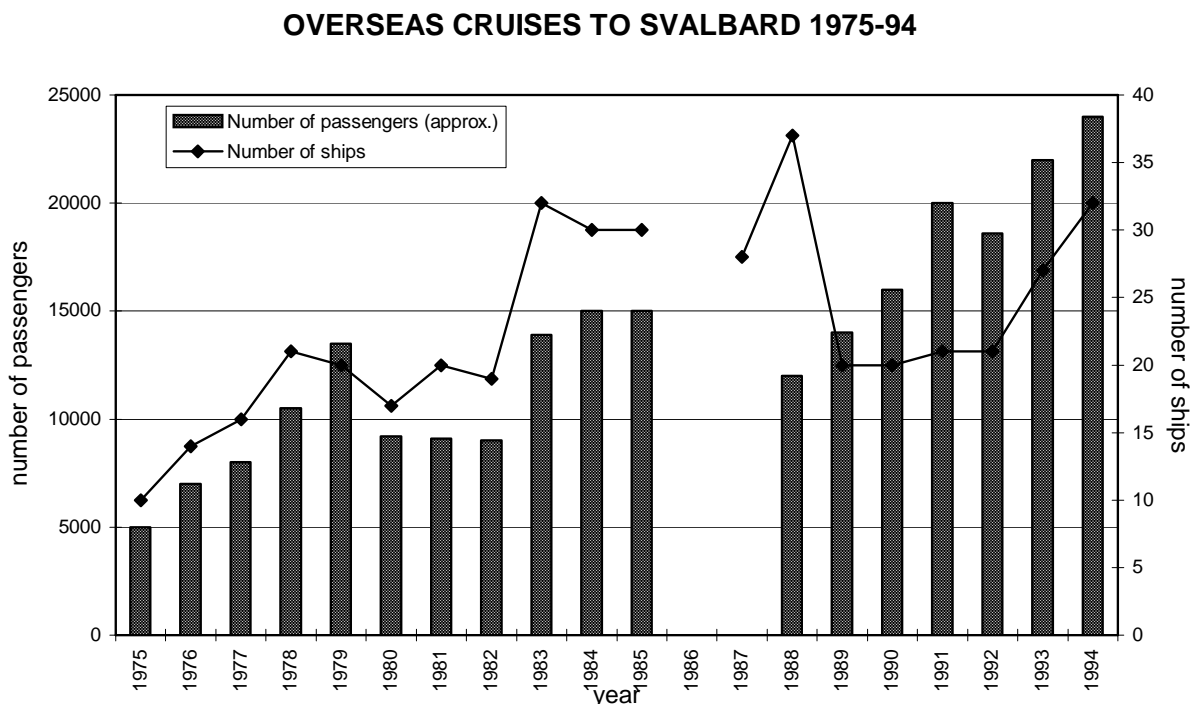


Figure 2. The number of passengers on overseas cruises to Svalbard has increased more than 4 times since 1975, from about 5000 to 24,000.

Overseas cruises to Svalbard are mostly the domain of relatively large ships, which visit the archipelago once or a few times during the season. They land tourists at a few traditional places every summer. These are famous spots or good “harbours” for landing with small boats. Data from the last few years show a trend towards more frequent landings on the west and north coasts of Spitsbergen. In 1994, reports show 198 landings and 46,105 tourists put ashore in such spots (the figure indicates that many passengers are landed two or more times during a cruise). Most people land at Gravodden in Magdalenefjorden in the Northwest Spitsbergen National Park. Whalers who perished were buried here in the 17th century. Because of the heavy traffic at Gravodden during two months every summer, the vegetation is almost totally worn away. Impacts on vegetation and historical monuments are evident in a few other locations too. In addition to Gravodden and Møllerfjorden, also in the Northwest Spitsbergen National Park, large groups of people land in the settlements of Longyearbyen,

Barentsburg and Ny-Ålesund (see Figure 1).

### OVERSEAS CRUISES TO SVALBARD IN 1994

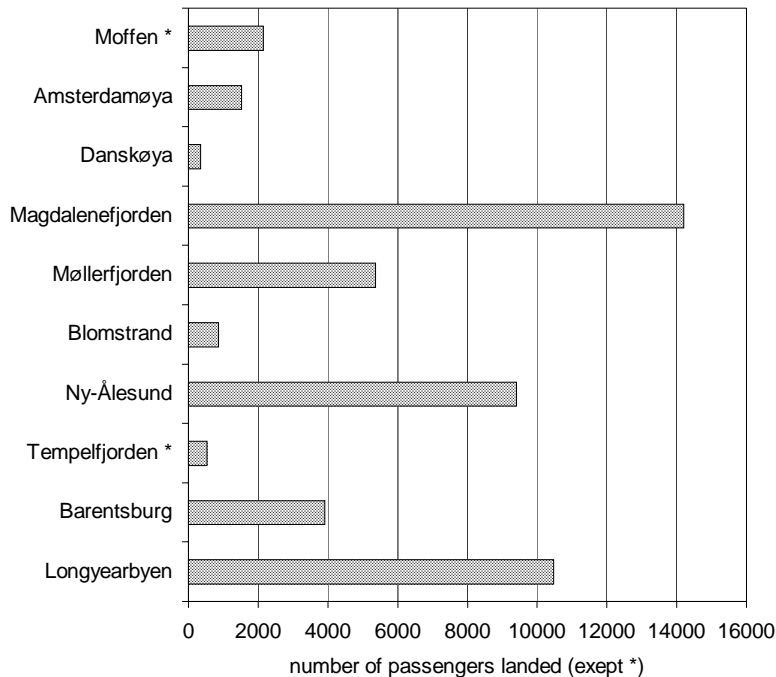


Figure 3 Number of passengers from overseas cruises to Spitsbergen landing at various localities.

Coastal cruises with smaller vessels are also arranged, mainly by small companies, most of them set up in Svalbard. They carry small groups of tourists, either on fjord cruises within Isfjorden from Longyearbyen, or along the coast of Spitsbergen and in the eastern part of the Svalbard archipelago. In 1994, 7 small passenger vessels plied the Svalbard coasts. The data on this activity are not quite complete, but calculations based on a combination of rough estimates and exact figures from the companies indicate that about 3000-4000 tourists participated on such trips during the summer season. About 60% of these took one-day cruises in Isfjorden, and nearly 1/3 travelled longer distances on 3-day voyages or longer.

The small coastal cruises visit many spots around the archipelago, the west coast of Spitsbergen being especially frequently visited. Approximately 45 such voyages were made in 1994, about 35% being to the east side of Spitsbergen or parts of northeast and southeast Svalbard. Voyages to eastern parts of Svalbard will vary from year to year depending on the ice conditions. Tourists joining these coastal cruises seem to be people who are relatively concerned about nature, and many of the trips are marketed as ecotourism. There are no statistics to reveal the trend in this kind of tourism, but representatives from the companies claim that it is a stable market experiencing modest growth (maximum 5-10% in recent years).

There appears to be a growing interest for voyages to Svalbard by yacht. Some of these are organised to make several trips locally while they are in Svalbard by replacing the passengers in Longyearbyen at the end of each trip. In 1994, 17 yachts visited Svalbard, mostly travelling along the west and north coasts of Spitsbergen.

#### Field tourism

According to the tourist regulations approved in 1991, all tourists and other visitors entering protected areas in Svalbard as participants on organised trips or as individual visitors have to notify the

Governor in advance. In addition, the Governor requests notification from all tourists visiting areas outside the settlements.

Approximately 1000 people have been registered individually by the Governor each year since the regulations came into force in 1992, as unorganised tourists, organised tourists, scientists and others. In 1994 there were 751 unorganised tourists. In addition, two companies make group notifications, but the exact number of tourists travelling with these companies is not always registered. Around 2000-3000 persons are estimated to be involved, and of these, roughly 300-400 are field tourists. There is also some limited tourism in connection with conferences and meetings, for instance people going for a short trip by snowscooter. No doubt very few of these are registered by the Governor. We may thus estimate that approximately 1200 to 2000 field tourists have visited Svalbard annually in recent years.

There are several categories of field tourists in Svalbard, ranging from winter tourists travelling by snowscooters or skis to the kayaker in summer. The field tourism segment seems to be rather stable, but the figures are uncertain. However, according to statistics, unorganised field tourism has been increasing slightly. Most visitors still come in summer (approximately 70% of all field tourists). The statistics show that most of the unorganised field tourists travel in central parts of Spitsbergen, not far from Longyearbyen (74% in 1994), and that Norwegians constitute the majority of this group (40%) followed by Germans (16%) and French (11%). Of the individually registered groups, as many as 56% were hiking or skiing, and only 7.5% travelling by snowscooter. At the same time, the figures from companies in Longyearbyen hiring snowscooters show a large number of hiring days, and these have increased significantly from 1992 to 1995 (Figure 4).

### SNOWSCOOTERS - DAYS HIRED

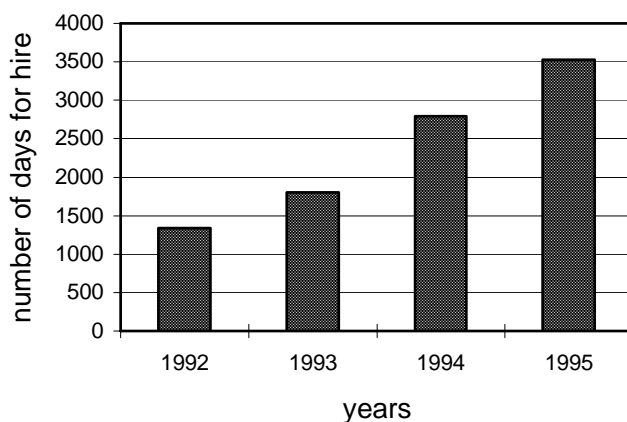


Figure 4 Snowscooter hire in Longyearbyen from 1992 to 1995.

Local people account for only a small portion of the snowscooter hire. The largest group is tourists, but scientists and people on business trips comprise a substantial part of the statistics. Consequently, there is probably a relatively large group of one-day tourists or tourists on short trips who do not register at the Governor's office. Among these we find many people visiting Svalbard mainly for other purposes, and combining their business with a short sightseeing trip by snowscooter.

Organised field tourism is now a varied activity. Companies, often small ones, guide clients on hikes, often combined with boat voyages, skiing, snowscooter travel and dog sledging, etc. Most of this activity is currently based in Longyearbyen and there seems to be a growing interest among the larger companies to offer their clients such adventures during their visits to Svalbard. It is still difficult to determine the trend, but the Governor will be demanding more specific figures from companies and bureaus in the coming years to obtain a better, more realistic basis for tourist statistics.

## Accommodation

The accommodation capacity in Longyearbyen has increased significantly during the last few years. It has also increased in Ny-Ålesund, but that settlement is mainly a scientific station and will not be developed for tourism. The two Russian settlements also offer accommodation, but the capacity has not been improved for many years, and the standard is still relatively low.

The total capacity in Longyearbyen in 1994/1995 is 403 beds and 258 rooms. This is nearly double that of the year before. There is also a camp site near Svalbard Airport. The number of guest nights at hotels and boarding houses in Longyearbyen has more than doubled from 1990 to 1994 (Figure 5). These facilities recorded a total of 31,311 guest nights in 1994. Based on a calculation that about 50% of the guests are tourists (Høifødt 1994), the same trend could be accepted for tourists during the same period. In addition, the camp site recorded 1318 guest nights, probably mostly tourists. The numbers staying at the camp site have varied a lot and in 1994 the figure was only 60% of that in 1993. The use of the accommodation in Ny-Ålesund has increased in pace with that of Longyearbyen, and 9251 nights were recorded in 1994. However, only 4% of these was registered as concerning tourists.

### TOTAL GUEST NIGHTS IN LONGYEARBYEN 1990-95

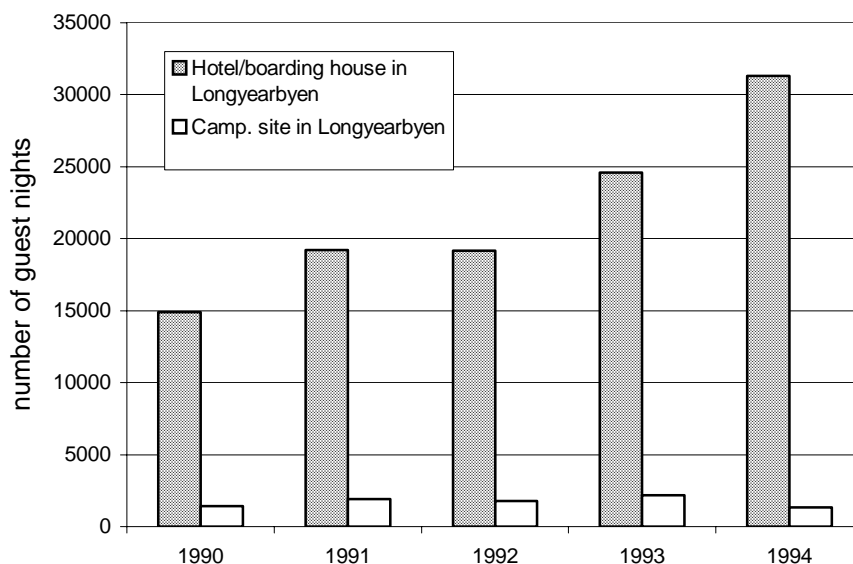


Figure 5. Accommodation in Longyearbyen has doubled since 1990.

## Air travel

In addition to travelling on cruise ships and private yachts, tourists travel to Svalbard by plane, landing at Svalbard Airport. The figures given by the airport distinguish between passengers on scheduled flights and charter traffic. Høifødt (1994) calculated that 38% of the passengers on scheduled flights are tourists. Together with charter passengers this shows a significant increase during the last two years, after remaining relatively stable for many years (Figure 6).

### NUMBER OF TRAVELLERS AT SVALBARD AIRPORT 1990-94

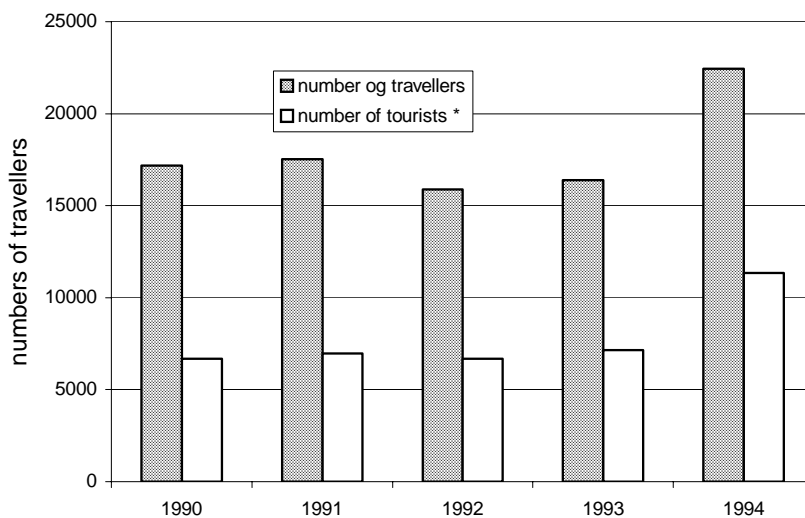


Figure 6. Passenger figures for Svalbard Airport from 1990-94 show a distinct increase at the end of the period.

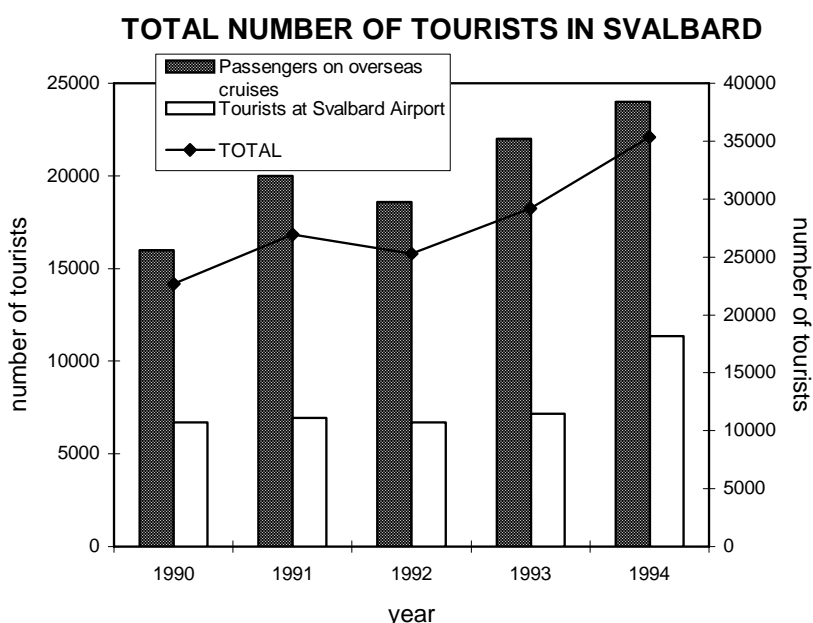


Figure 7. Total number of visitors to Svalbard based on figures from cruise liners and Svalbard Airport (refers to the numbers on the right hand axis). An unspecified number of tourists on cruises, possibly several thousands, arrive in Svalbard by charter plane or scheduled flights and must be subtracted from this total.

Together with the cruise traffic and yachts, the figures from Svalbard Airport should show the influx of visitors to Svalbard. These modes of transport indicate a maximum of about 35,000 tourists and other visitors in 1994. However, this is not entirely correct, since a significant number of tourists on overseas cruises arrive in Longyearbyen by charter plane or scheduled flights. The number is not



known, but could be several thousands. Tourists arriving by yacht are insignificant in this calculation. Even so, the estimate does show a substantial increase of tourists to Svalbard during the last five years.

Helicopters and other aircraft have so far only been used to a very limited extent for transporting tourists within Svalbard. Some use the scheduled services between the Norwegian settlements. There have been attempts to start “panorama” flights around the archipelago, but these have been prohibited by the authorities as they would conflict with the environmental policy for Svalbard (Ministry of Environment 1995). They would be detrimental to the endeavour to protect the wilderness quality found in Svalbard, since the noise they would generate would disturb animal life and also the wilderness atmosphere experienced by people.

**Violations of the environmental regulations**

The Governor of Svalbard has the overall management authority in Svalbard and is chief of police and chief of environmental management. The Governor’s office is therefore responsible for all law enforcement in the archipelago including prosecuting violators of the environmental regulations.

Only a few violators have been prosecuted during the last ten years (Figure 8). Even though this does not show the entire picture, due to enforcement difficulties, it probably indicates that the Svalbard tourist has respect for the environment and the environmental regulations. According to figures from the Governor the most common violations concern the wildlife regulations, regulations for protection of the environment and the special regulations for protected areas (Figures 8 and 9). During the last ten years the penalties meted out by the courts have increased dramatically, which indicates that the authorities have put increasing priority on preventing environmental crime.

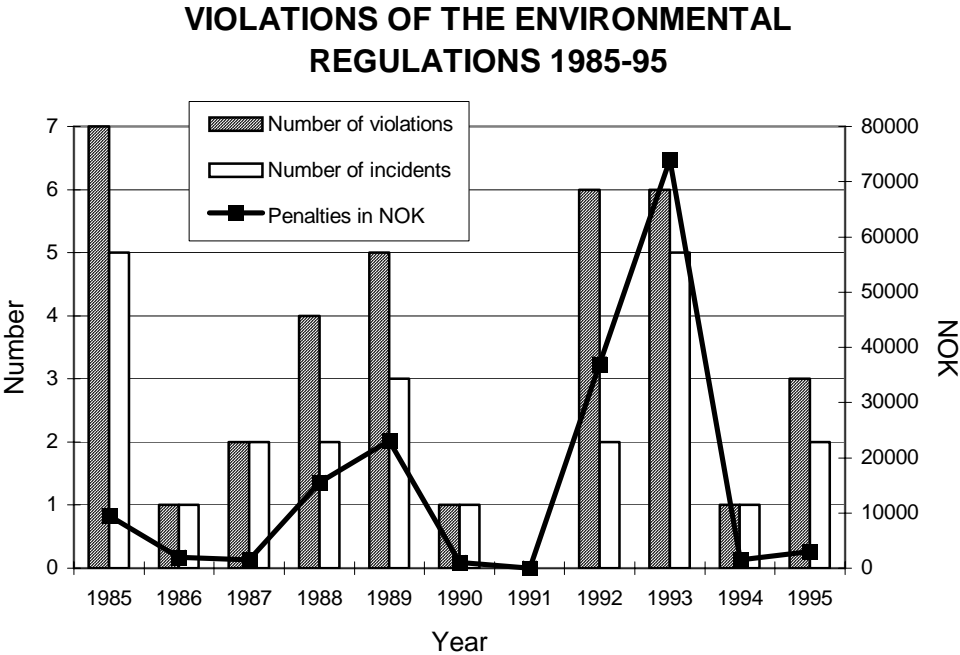


Figure 8. Environmental crime among tourists in Svalbard is low and the figures show that the authorities have put increasing priority on preventing such crime (one incident sometimes covers violations by two or more people).

## VIOLATIONS OF THE ENVIRONMENTAL REGULATIONS 1985-95

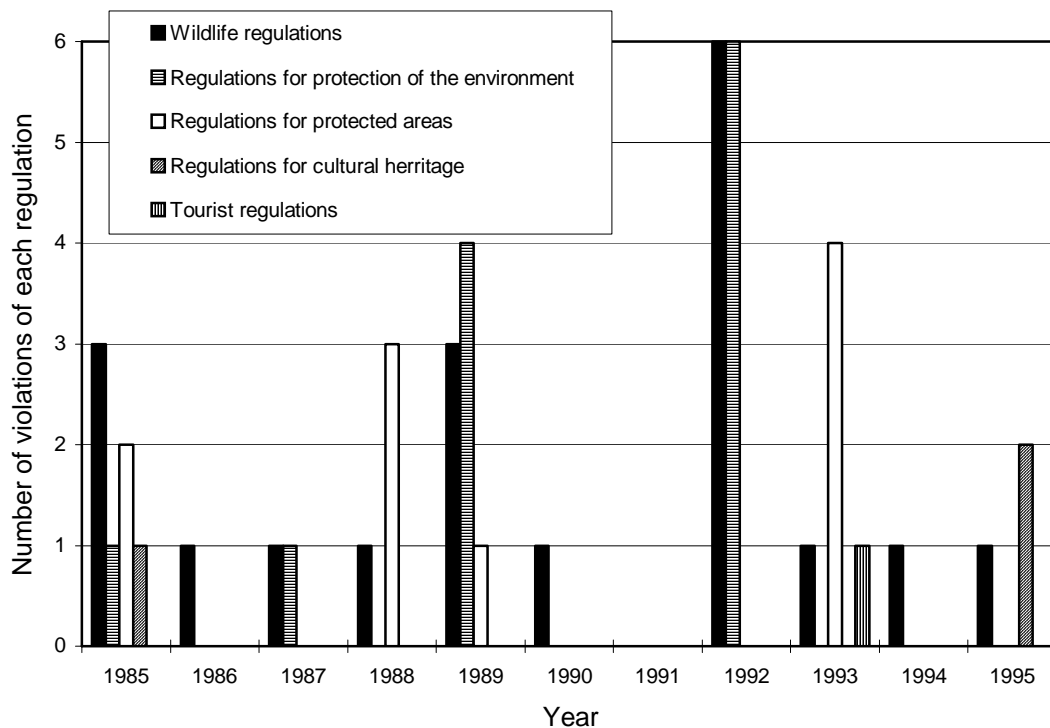


Figure 9. Violations of the wildlife regulations, regulations for protection of the environment and the special regulations for protected areas are most common

### 4.3 Who are the tourists and what do they seek?

Research concerning the tourist population in Svalbard has been described in a number of publications (Kaltenborn 1991, Kaltenborn & Emmelin 1993, SNU 1994). These arrived at roughly the same conclusions as regards the composition of this population, although the first two did not consider the full range of tourists and are therefore not strictly statistically representative. However, for the purposes of this report, the data give a sufficiently accurate picture of the types and distribution of tourists in Svalbard.

Svalbard tourists form an extremely heterogeneous group of visitors coming from a large number of countries. Less than half are from Norway. Most of the remainder come from other European countries, but a few are also from other continents. The visitors represent a wide range of educational and professional backgrounds. This also pertains to previous recreational experience, with the entire range from novices to expert wilderness travellers.

In connection with a local tourism plan, nine main types of visitors were identified (SNU 1994). These are:

**Business travellers:** visitors who have meetings with or carry out work for local institutions or individuals; they often extend their stay to engage in tourism activities

**Meetings, seminars, conferences:** many are held in Svalbard to take advantage of the setting and opportunities for tourism associated with it

**Scooter tourism:** organised trips by snowscooter and hiring of snowscooters

**Cruise tourism:** travellers who visit Svalbard only briefly, without staying overnight on shore

**Coastal tourism:** visitors who arrive in Svalbard by plane and travel with small vessels along the coast.

**Commercial field tourism:** organised trips on foot, skis, snowcooters and dog sledges, mainly run by local operators

**Non-commercial field tourism:** travellers who plan and carry out recreational field activities without buying services from a tour operator

**Research activities:** visitors who spend time in Svalbard in association with research activities

**Longyearbyen tourism:** travellers who only spend time in Longyearbyen and/or its immediate surroundings.

The tourism product in Svalbard comprises different types of attractions and services. The natural environment is undoubtedly the main attraction of Svalbard and the key element around which all tourism is centred. Studies have shown, however, that visitors are concerned about many aspects of the environment and that these all play a part in the total experience of Svalbard (Kaltenborn 1991).

The experience of the physical environment as a vast, pristine setting dominates among Svalbard tourists. The Arctic has traditionally conveyed an image of immense expanses of untrammelled, clean nature. Today, many visitors wish to experience a high degree of *naturalness*, that is, an absence of impacts and disturbance and plentiful views of scenic mountains, glaciers and the sea. Many also seek *remoteness*, at least in a subjective sense, that is a feeling of remoteness, not necessarily physical remoteness by all standards. There are few places left in the world where one can experience a natural environment virtually devoid of human traces such as roads, settlements and other human constructions. Parts of Svalbard offer remoteness in an absolute sense, much like a visitor a hundred or more years ago must have encountered these islands. On the whole, the Svalbard environment conveys a great sense of remoteness, at least outside the few settlements. Likewise, *encounters with motorised traffic* be it at sea, in the air or on shore seems to be a fairly negative element of the experience for most visitors. This is interesting, considering that almost every tourist depends on some amount of transportation to get around in Svalbard and have access to recreational opportunities. *History and culture* is another dimension of the environment, reflecting a strong interest in the human history of Svalbard as well as in present-day trapping activities. Tourists do not see the islands merely as pure wilderness, totally devoid of human traces, but also accept and appreciate the human history of the area. Both commercial and non-commercial tourism depend on a certain level of *infrastructure and services*. Most visitors express a need for transport around the archipelago. Many also express an interest in improved field accommodation, with facilities like huts. Yet another aspect of selling and managing tourism products is the need for improved information about services, facilities, regulations and recreational opportunities.

Tourists travel extensively throughout Svalbard, and most of the archipelago is visited by tourists during the course of a year. However, distinct recreational use patterns cause much of the traffic to be concentrated in certain locations and corridors. Central Spitsbergen and the west and north coasts of Spitsbergen receive the bulk of the use, but commercial as well as non-commercial tourist groups also travel to the more inaccessible eastern and northeastern parts of Svalbard. During the last few years, traffic to the more remote parts seems to have increased.

The various parts of Svalbard offer different types of experience. All of Svalbard is characterised by a barren, High Arctic landscape, but the traffic, impacts and relicts from present and former human

history vary. In Longyearbyen and its immediate surroundings, key elements are the mining history and a modern human community in the far North, as well as a readily accessible natural environment on the doorstep. The area around the large Isfjord in central Spitsbergen is a microcosmos of Svalbard, yet fairly accessible without great investments in time or money. Ny-Ålesund to the north displays mining history, past and present research activities and an outstanding natural environment. Northwest Spitsbergen has some of the most rugged and spectacular surroundings and a large number of cultural relicts, especially from the early whaling period. Southern Spitsbergen houses much of the same, but is more exposed to difficult weather conditions in summer and is considered less accessible for tourism. The remote east coast of Spitsbergen, along with Nordaustlandet, Barentsøya and Edgeøya, is wilderness, almost without trace of humans and comprising large expanses of nearly undisturbed polar ecosystems. Trips to this area are costly, time-consuming and often difficult due to variable ice and weather conditions.

#### ***4.4 Development of tourism***

##### **The extent and organisation of the present tourist industry**

The local tourist industry has grown over the past few years and now numbers around 15 companies and operators. These vary considerably in size, turnover, number of employees, length of season and the products they deliver. Commercial tourism has traditions and roots far back in history. The present industry, however, only goes back to the 1980s. It is during this relatively brief period that we can witness the transition from a pioneering, experimental phase with many pitfalls and problems to a relatively stable trade employing people all year round. It was not until 1992 that the Norwegian parliament gave its formal consent to establish tourism as an industry in Svalbard.

Today, roughly one hundred people are employed one way or another in tourism in Longyearbyen and 50-60 man-labour years are created by tourism annually. The tourist industry now constitutes a significant part of the economic activity of Svalbard and is probably growing. SNU (1994) states that much of the travel activity is a function of the ordinary needs of the Svalbard community, but that more than half is caused by tourism based on the potential for recreational experiences offered by Svalbard. Attempts have been made to assess the economic importance of tourism and the number of jobs it creates. Tables 1 and 2 give an overview of the 1993 situation.

Several measures have been taken to co-ordinate tourism in Svalbard and increase its efficiency in terms of product lines and products. In the early-1980s tourism was operated by a few companies without clear strategies or plans. Today, it mostly represents a relatively stable trade with goals, plans and a willingness to develop a competent industry for the future.

Table 1. The effects of tourism on employment and economy (note that value increase does not equal turnover)

	Man-labour years	Value increase (Mill. NOK)
In tourism	59	17
Spin off - other trades	25	10
Indirect importance	25	9
Sum:	109	36

Source: SNU (1994)

Table 2. Employment and value increase in different sectors of tourism in Svalbard

	Man-labour years	Value increase (Mill. NOK)
Hotels	18.0	5.9
Transportation	8.0	3.1
Travel agencies and tour operators	14.2	4.6
Experience and activity based trades	3.2	0.5
Local food services	15.1	3.0
Sum 1993	58.5	17.1
Sum 1991	50.9	11.7

Source: SNU (1994)

In 1994 a tourism plan was developed for Svalbard by the industry itself (SNU 1994). It was the product of a process involving a large number of people and institutions, including people engaged in tourism, central authorities, researchers and local decision-makers in the administration in Svalbard. It is intended to serve as a tool for developing commercial tourism in Svalbard within the opportunities and constraints set by national legislation, such as environmental regulations, tourism regulations and the management plan for tourism. The plan describes types of tourism, its resources and attractions, as well as the market situation. It suggests priorities for public and private investment associated with this sector and outlines strategies for product development, marketing and the necessary control with the development of tourism in Svalbard. The plan is a new effort by Svalbard standards, as it builds extensively on local resources and participation, so that all the contributors are likely to feel some ownership in the document.

The plan defines a series of goals for developing tourism. There are many goals, some being vague and potentially in conflict with each other. Yet, these visions for the future of commercial tourism in Svalbard represent a valuable platform for further work. The plan states that:

- the tourist industry must be ecologically sustainable

- tourism must be developed within the main goal of securing continued Norwegian settlement in Svalbard
- the tourist industry must be a commercially profitable business
- tourism in and from Longyearbyen is to be increased
- tourism must be extended to become a year-round activity
- High Arctic nature is to be the key element in the marketing of Svalbard
- knowledge and information must be an element of the tourism product
- visitors must be informed about and encouraged to respect the special conditions of the islands
- tourism is to be controlled and evaluated.

As part of the follow-up process, seven companies involved in tourism are developing what is being called the Svalbard network. The purpose is to create a co-operating organisation where one half is financed by the industry itself and the other by public funding. Activities such as marketing, product development, hosting services, training and quality control are to be co-ordinated. Potentially, a co-ordinating agency like this has several benefits, like increasing efficiency in developing uniform quality standards, reducing overall costs in marketing and training, and improved agreement on criteria for future strategies and development. It could also help to project the local tourist industry as a relatively large business comprising several small, well-integrated units.

### **Some aspects of future development of tourism in Svalbard**

As tourism is growing and becoming more permanent, there are signs that it is diversifying as well as consolidating. A few traits regarding future development will be considered, based on interviews with representatives of the major companies and our own judgments.

The industry realises that improved co-operation between competitors in such a small market will most likely be an advantage to everyone, as long as they develop slightly different profiles in their services and products. Even though relatively few tourists come to Svalbard and all of them buy more or less comparable products, the number of market segments is quite high. In other words, it appears that important first steps have been taken to consolidate the tourist industry and that there are grounds for co-operation in the future. However, if economic growth in a limited market is to be sustained and environmental concerns met, the products and market segments must be developed further.

One of the main concerns among several operators is to expand the season. Today, the majority of activity is in parts of the spring and summer. A viable future tourist industry will depend in part on a longer season, with more activities during the winter. Many in the industry seem to think that it is possible to achieve this. This expansion will most likely come among business travellers and those taking part in conferences, seminars, etc.

Although the tourism sector utilises much of Svalbard, most of the activity is on Spitsbergen. It seems likely to increase more in the Isfjord and Longyearbyen areas than elsewhere, at least in the near future. Few of the operators have fixed packages far away from Longyearbyen, using permanent camps, etc., but this could of course change if more facilities are developed. Some operators express an interest in constructing support facilities like huts for the longer versions of their guided trips.

It is difficult to forecast in which tourism segments a possible growth will occur in the future, but several operators highlight the need to give priority to the Scandinavian market. This is partly because this segment is easier to reach than markets further away, partly because the potential is believed to be high, particularly for groups, and partly because the Scandinavian populations have a closer relationship to the types of environments found in Svalbard than many other groups of travellers. Some operators claim that it is important to limit the non-commercial forms of tourism and stimulate the types and segments of tourism which leave revenue in the islands. This view is, of course, rooted in the need for income and does not necessarily imply that visitors who arrange their own trips are less desirable in other ways. Whether or not this is possible is another question. Tourism companies can

probably never control all tourism activities in Svalbard unless specific legislation is passed requiring all visitors to participate on guided trips. With the present management regime and Norwegian legislation this is hardly possible in the foreseeable future. Although it may be desirable both from an economic and managerial viewpoint to control tourism as much as possible through guided activities, the only realistic scenario includes a substantial portion of non-commercial tourism as well. In terms of the human dimensions involved in tourism and the importance which free and untrammelled nature can play in people's lives and in their search for quality of life, it should not be a goal to direct all recreational use of nature into the commercial tourism sector.

Visitors to Svalbard evidently embrace a great diversity of backgrounds and reasons for travelling to Svalbard. The tourist industry in Svalbard is increasingly recognising this by providing specialised tours and packages. Some specialise in "environmental tourism", mostly using traditional means of travel like skis and dog sledges. These operators strongly support management actions which will designate certain areas for non-motorised use only, to avoid conflicts between user groups. The tourism sector also sees the need for more custom-tailored packages, in general to fit individual needs and preferences, and more tour products focusing on "research tourism" and learning. Generally, tour operators point to the desirability of providing total packages for the tourist, i.e. a product which includes all the visitor needs from the beginning to the end of a trip. Total packages give the best earnings in the long run and seem to satisfy large portions of the paying tourist market.

So far, the tourism sector seems to perceive few conflicts between its interests and the legal and institutional conditions within which it has to work. The management plan for tourism and other environmental regulations and management actions have so far had little direct impact on tour operators, but more active management has improved communication between the management and tourism sectors. It is our impression that the key concepts and structure of the management plan agree reasonably well with the needs and visions of the tourism sector. Major conflicts in the future are more likely to be associated with other resource uses, such as oil and gas development, new road construction in pristine areas, or conflicts between tourism groups, for instance between commercial and non-commercial tourism.

Both managers and tour operators seem to agree on the need to evaluate and monitor tourism as it develops in Svalbard. If this is to be achieved, a better registration system and database on tourism activities must be established. Activities and products are developing rapidly, and the tourism population seems to be quite dynamic, so improved knowledge about recreational behaviour as well as its effects on the environment will be needed in the future.

#### ***4.5 Actual and potential impacts of tourism in Svalbard***

Tourism in Svalbard is still a relatively controlled activity and environmental impacts are few and limited. The main ones are impact to the tundra and historical monuments, spreading of litter, animal disturbance and interruption of the wilderness experience. The potential impacts are probably also in the same category. There have been no investigations on the disturbance effects and impacts on the wilderness experience. Only insubstantial registrations of impact and litter have been made.

Impact from traffic is found in a few of the most popular tourist destinations in Spitsbergen (see section 4.2). This is mainly connected with the landing of tourists at locations with historical monuments. Impact on the tundra and historical monuments shows that there should be a set of explicit limitations on use and that traffic should be regulated in certain areas. This has not been done yet, but should be followed up as an implementation of the management plan (see section 5.2).

The Governor of Svalbard and the Norwegian Polar Institute have registered litter along the shores of Spitsbergen for several years. In some places, relatively large quantities of litter have been found to have floated ashore. It is evident that much of this comes from shipping around Svalbard and in the

Barents Sea. Analyses of the litter show that the fisheries sector is responsible for much of it (Ministry of Environment 1995). Because of the main ocean currents around Svalbard, much litter is transported to the archipelago over great distances. Inspections of cruise ships carried out by the Governor's representatives suggest that waste is handled properly on cruise ships today.



## **5 Management of tourism in Svalbard**

### ***5.1 Development of a management plan***

#### **The need for planning**

Management agencies need to limit and control the use of the natural environment, whereas the tourist industry must meet certain requirements in order to operate commercially. For instance, tour operators must have reasonable access to a diversity of areas. They cannot market and sell Svalbard if they only use the most disturbed and least attractive areas. In addition to a good product and a market, their most important requirements are predictable management in the sense of clear rules and regulations, stable policies and a good dialogue with decision-makers. Until recently, this has been a considerable problem, causing great difficulties for the tourist industry.

During the past couple of decades, several factors have combined to raise political consciousness about the complex tasks of tourism management, wilderness protection and economic development. The international adventure travel market has increased, especially with focus on exotic, "green", destinations, the local infrastructure has improved, and the awareness of the general public concerning environmental protection has greatly increased.

From 1982 to 1991, the Norwegian Government produced several documents with important implications for the management of nature and tourism in Svalbard (Ministry of Environment 1982, 1995, and Ministry of Commerce 1986, 1991). These include the need to protect the wilderness character of the Svalbard environment, integrate economic development with environmental protection, pay special heed to the vulnerability of the arctic environment, and produce a management plan for tourism and recreation. Thus, there is a clear mandate for managing and regulating tourism.

#### **Goals of the recreation management plan**

In 1991, the Ministry of Environment initiated work with a macrolevel plan for managing tourism in Svalbard. After several drafts, a plan has now been approved and is currently (1995) being implemented. It states that one of its prime purposes is to contribute to the development of tourism within the limits set by natural and cultural historical resources and in such a way that the wilderness character of the environment is preserved. The plan is intended to function as a tool for realising the political goals of protecting nature and managing tourism. It operationalises these goals. Furthermore, it is a framework which outlines the main guidelines for the future control of tourism (Ministry of Environment 1995). Several specific goals are stated for the different recreation zones outlined in the plan.

The management plan covers all of Svalbard and the surrounding sea as far 4 nautical miles from the shore. It encompasses all types of recreational use and travel outside the settlements. This includes all motorised and non-motorised traffic outside settlements which is not related to public management or services, or activities associated with research, prospecting and extraction of natural resources. The plan applies to no other industries than commercial tourism. The recreational activities of Svalbard residents are also included in the plan, as these activities cannot be separated from other types of recreation and tourism with respect to the total influence on the environment.

#### **Planning concepts**

The aim of the plan is to establish goals for acceptable levels of use and impacts in different geographical regions of the archipelago. The plan is structured around a zoning system, the intention

being to provide management for different levels of facilities, regulations and use within the different zones. Active monitoring of the environmental conditions will be required to achieve this.

The plan builds on principles from recreation planning developed in a number of locations and types of settings. The Recreation Opportunity Spectrum (ROS) and the Limits of Acceptable Change System for Wilderness Planning (LAC) (Stankey et al. 1985) are two related concepts for planning and management of recreational use in natural settings. ROS is a framework for inventorying and describing recreational opportunities (Driver & Brown 1978, Clark & Stankey 1979, 1989, Driver et al. 1987). Recreation values are integrated into land management planning by stating explicit management objectives regarding the desired resources and social conditions in different recreational areas. Recreational opportunities are seen as combinations of *physical, social and managerial characteristics of settings*. A basic assumption is that most people seek diversity in recreational opportunities, that is they seek different types of areas and different types of environmental conditions. ROS is a way of organising this need for diversity by providing a spectrum of recreational opportunities. Recreation zones (often called “recreation opportunity classes”) can divide a geographical area into units with different opportunities and characteristics.

Most of the data required for the plan were obtained through surveys of recreational user groups and field studies. The surveys which were carried out among populations of visitors to Svalbard, as well as residents of the islands, focused particularly on questions related to the basic structure of ROS. The studies measured attitudes and preferences towards the physical, social and managerial attributes of the environment, as well as expectations, experiences and levels of satisfaction. Recreational use patterns were also recorded and analysed by using a geographic information system. The accessibility and suitability of different regions for recreational activities as well as impacts on the natural environment were registered through field studies.

A major reason for a large data-gathering effort before the planning process commenced was the question of whether or not this planning model would fit into the Svalbard context. The population of recreational users was not well defined, and little was known about their characteristics. Thus many questions had to be answered. For instance, do the users perceive the environment as consisting of physical, social and managerial attributes, and, do the users perceive Svalbard as offering a spectrum of recreational opportunities?

In the case of Svalbard, five factors were used to characterise and distinguish the recreation zones, namely; access, managerial regulations, other types of resource uses, amount of traffic and facilitation. Figure 10 illustrates this principle. Access varies with distance to settlements, infrastructure and climatic conditions. Managerial regulation describes which laws and regulations pertain in each area. Other resource uses describes which activities occur in the area, like for instance research and oil and gas exploration. Amount of traffic covers all types of human movements, motorised as well as non-motorised, including the present situation and statements about acceptable levels in the future. Facilitation describes necessary and acceptable actions to stimulate tourism, such as information, huts, maps with special information, etc.

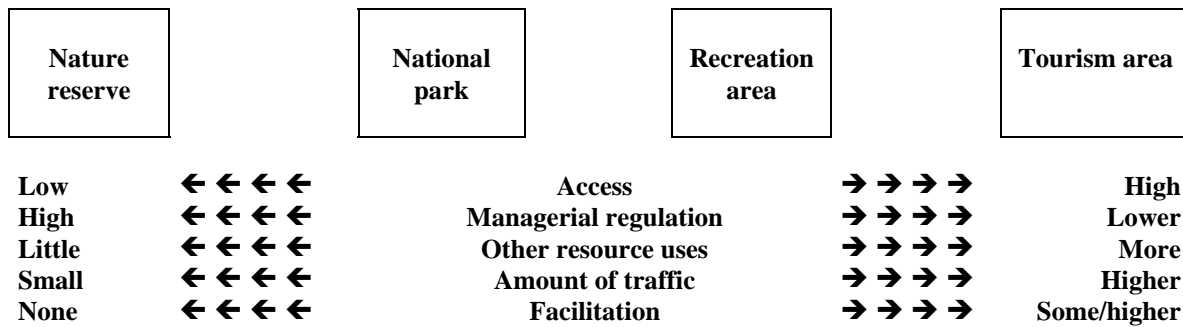


Figure 10 Management categories and factors which identify the categories in the plan

The Svalbard plan is structured around a system of four management zones, as figure 10 shows, which are divided into nine management areas (Figure 11). Even though two geographical areas belong to the same management zone, they can differ in other important respects, such as landscape qualities, fauna, flora and cultural history. Contrary to a management zone, a management area is site and geography specific. Each of the four management zones has unique goals and management strategies. Each of the nine management areas is defined by a geographical boundary, a management zone and a prescription for specific management actions. In addition to the nine management areas which have been allocated so far, it is proposed that two areas be designated close to Longyearbyen in central Spitsbergen where all motorised travel is prohibited. The purpose of this measure is to provide for wilderness-type recreational opportunities close to a settlement, thus reducing the potential for conflict between motorised and non-motorised groups.

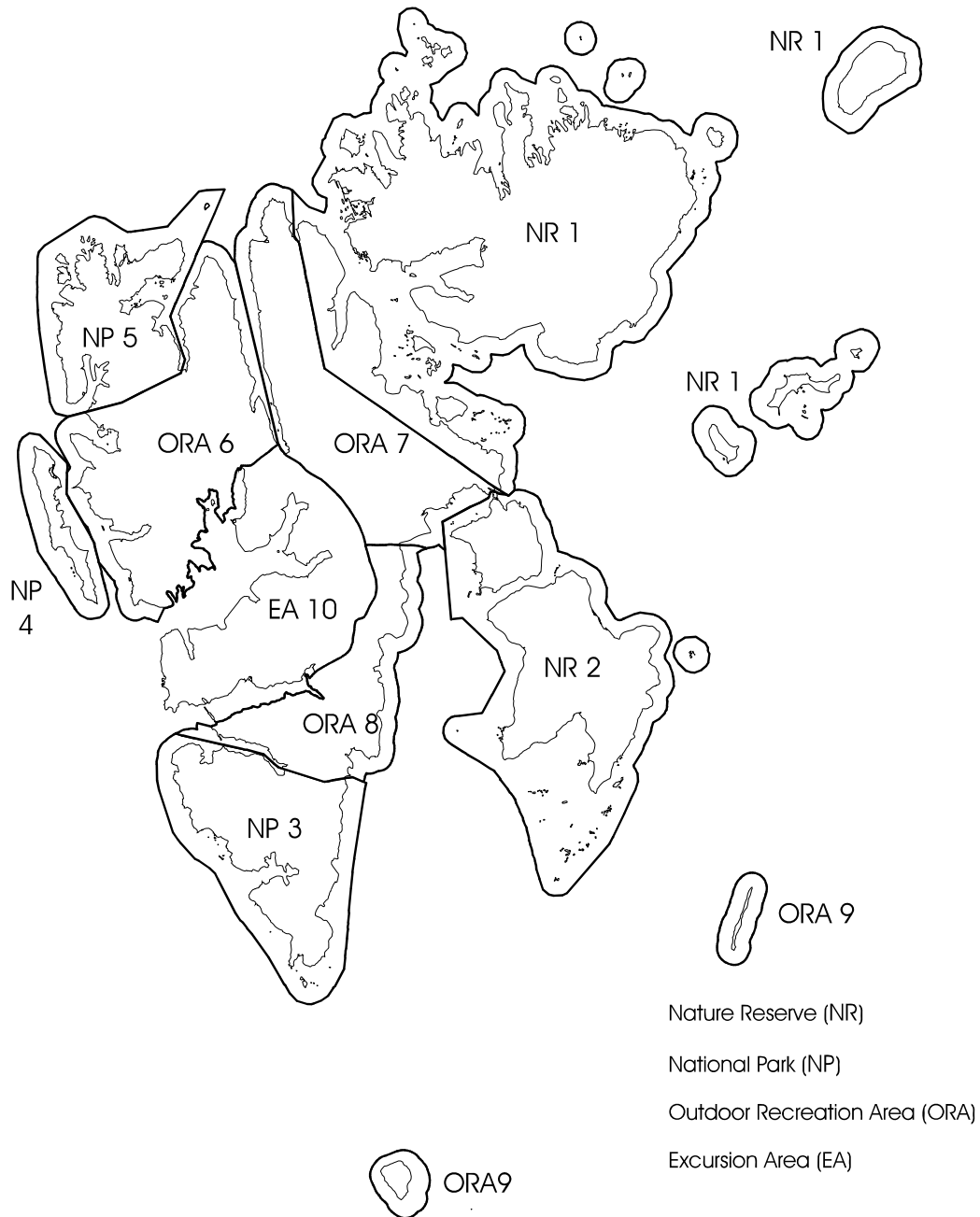


Figure 11. The distribution of management categories and areas in Svalbard

### ***5.2 Implementation of the management plan***

The management plan divides Svalbard into 9 different management areas based on environmental and management criteria and acceptable use within the concept of protecting the wilderness quality. In other words, it is intended a framework for sustainable use. The plan will be implemented by several management initiatives. The Governor of Svalbard will be the institution responsible for implementing the plan.

The plan will be implemented using direct as well as indirect measures. Indirect initiatives are often more effective than direct regulations and specific guidelines because they tend to stimulate the users towards a desirable behaviour. A set of regulations and guidelines must nevertheless exist to protect

special areas and limit destructive use. The management plan recommends implementing direct measures within existing regulations. The following measures are recommended:

- limits to travel by motorised vehicles
- environmental monitoring and inspection
- organising and information

### **Travel by motorised vehicles**

The use of off-road motorised vehicles in the Svalbard terrain is generally prohibited except outside the protected areas when the ground is frozen and covered by snow (the ground is normally snow covered for 5-6 months of the year). Outside the protected areas there are no limitations on the use of snowscooters on snow-covered ground, and there are no limitations on the use of boats at all, and in principle not for hovercraft either. There are no minimum altitudes for flights by aircraft in any area, just landing prohibition in the protected areas. The Norwegian Ministry of Environment is currently working on an amendment to the regulations, in order to achieve a more restrictive policy regarding off-road traffic.

### **Environmental monitoring and inspection**

To be able to draw up management measures aimed at securing sustainable use of the environment, better knowledge is required about trends in tourism and outdoor recreation in Svalbard. To acquire this, improved annual tourist statistics are needed. This is one of the first implementation measures undertaken by the Governor under the terms of the plan. In 1995 improved figures were obtained from the companies involved in tourism, and the Governor is working on a plan for collecting adequate data in the years to come. Tour operators can, in accordance with the tourist regulations, be required to give the necessary information as part of the notification procedure to the Governor.

There is a need to prepare a monitoring plan for the most affected areas to assess the effects of tourism and outdoor recreation on the environment and on protected historical monuments. The methods and parameters to be monitored will be decided by scientists who will also analyse the data, but the monitoring procedure will be the responsibility of the Governor's office. It is suggested in the management plan that the data should be stored and analysed in a Geographic Information System (GIS). A monitoring system will probably be active within a year or two. This will be a useful tool for evaluating what actions need to be taken by managers.

The Governor's office has for several years carried out inspection in Svalbard using boats, helicopters and snowscooters. The inspection in summer was improved in 1994. Inspectors equipped with rubber boats and the necessary equipment for staying two months in the field, patrolled the most intensively used parts of the west and north coasts of Spitsbergen (from Isfjorden to Wijdefjorden). As a consequence of the very promising results obtained, this continued in 1995 and will be practised in the future as well. The eastern part of Svalbard would be much more difficult and expensive to patrol in the same way as the west coast of Spitsbergen. This part of the archipelago is therefore inspected occasionally by helicopter and fixed-wing aircraft. The Governor will consider co-operation with the Norwegian Coastguard Authority to cover these areas more effectively. This supervision is very expensive and the management plan suggests introducing a levy on tourists to meet some of the costs involved.

### **Organisation and information**

The plan also proposes the provision of better information in areas where tourism is to be given priority. This will hopefully lead tourists to visit such areas, and will probably prevent popular sites and historical monuments from being badly damaged or destroyed. The Governor has already evaluated possibilities for providing such information at the most popular localities in the Northwest

Spitsbergen National Park. A more comprehensive management plan for the national parks will be prepared soon, before final decisions are taken about information measures in these areas.

Competent and responsible guides for the cruise ships and coastal cruise vessels are important for achieving the goals for sustainable use. In 1992/93, a training course for guides was arranged in Longyearbyen as an experiment. Its evaluation was very positive and it was recommended to establish it on a permanent basis. The Svalbard Business Development Co-operation ran a similar course in Longyearbyen in 1995. The management plan also suggests evaluating the introduction of an obligatory authorisation for guides in Svalbard.

The management plan, furthermore, recommends establishing an information centre in Longyearbyen to improve the implementation of information measures and to make necessary information more available. A study identifying information needs among tourists has already been carried out (Kaltenborn 1994).

## **6 Effects of tourism management**

### ***6.1 The role of the plan in future management and development***

The management plan for Svalbard is a macrolevel plan presenting a framework with guidelines for managing tourism in the islands. Its three main functions are to describe the opportunities for recreation throughout the archipelago, record the environmental attributes that are perceived as salient by those involved in recreation, and prescribe sets of short-term and long-term management actions considered necessary to achieve the goals of the plan.

The success of any management plan that requires specific allocations of resources hinges precariously on the consent of the various interest groups in the area. While the power and usefulness of local participation is often underestimated, scientific and professional planning expertise is nearly always also required in a good planning exercise. The crux of the problem in Svalbard was to find the appropriate combination so that long-term societal and ecological concerns beyond the immediate interests of the local community were secured, while at the same time recognising local knowledge and interest, so as to give these interest groups a feeling of ownership in the plan. Considering the numerous previous conflicts over resource use in these islands the management plan will have limited chances of any success unless it is understood, perceived as legitimate and seen as useful also for local interests. The basic philosophy in transactive or participatory planning is that people will not understand that which they do not engage in, and will not support that which they do not understand (Friedman 1972).

The plan provides overall guidelines for managing tourism. Site-level planning must now be carried out for new tourist facilities like improved information, development of transportation and accommodation facilities, protection of cultural relicts and monuments and so forth. The local tourist industry, consisting of companies based in Longyearbyen, is currently preparing a strategic plan within the framework of the overall management plan for tourism.

### ***6.2 Effects of management measures***

The implementation of the management plan for tourism is expected to have effects on the tourism system as well as the environment in the future. To attain the goals of the plan some restrictions on activities are believed to be necessary. Limitations on certain categories of tourist traffic will be introduced both outside and inside the protected areas. According to the management plan this includes:

- prohibiting the use of snowscooters in two areas near Longyearbyen to secure areas for skiing and dog sledging without interference from motorised traffic
- seasonal limitations on snowscooter traffic to avoid damage to the tundra
- controlling and limiting coastal cruises to the nature reserves in eastern Svalbard
- aircraft restrictions; such as minimum overflight altitudes and bands on landings outside authorised landing points
- channelling and improving the control of snowscooter traffic by local people in the national parks.

All these measures must be supported by regulations, increased control, improved co-operation with tour operators and better information. Their effect will depend on how successfully this is handled by the authorities. The first step is to prepare site-specific plans for the different management areas within the management plan for tourism in Svalbard.

Limitations on snowscooter traffic in certain localities near Longyearbyen is causing some conflicts with the local people, but these will probably be resolved by co-operation between the authorities and the local people during the planning process. Any limitation on snowscooter traffic will, however, cause some conflict with the local people. Svalbard lacks roads beyond the settlements and snowscooters are therefore a very popular means of transport that make travelling easier. The local people have a tradition for using snowscooters freely.

### **Protection measures**

Approximately 56% of Svalbard is protected as national parks or nature reserves. The central part of Spitsbergen is not included in this area. The protection regulations set restrictions against certain human activities to achieve the intention of the protection measures. With few exceptions, these regulations do not limit normal tourist activities. Traffic is only prohibited in the small bird sanctuaries and in two special localities in nature reserves. There is, however, some fear about possible impacts of an increase in tourism to remote areas of Svalbard. Reduced access to the nature reserves and vulnerable localities will be evaluated as measures to secure sustainable use.

Reduced access to the remote parts of Svalbard could increase the pressure of tourism in the more central parts of Spitsbergen and lead to environmental impacts there. According to the management plan for tourism the central part of Spitsbergen will be managed as an “excursion area” for tourism within the limits of sustainable use. A concrete management plan for this area will be prepared to achieve these goals. This will obviously set some limits on certain categories of tourism, and develop special control mechanisms both in the “excursion area” and in other management areas.

### **Control and inspection**

Increasing tourism has to be controlled by various management measures. Tourism far away from the settlements calls for the establishment of inspection routines that control the activity and make it safe. The Governor’s experience so far shows a growing need for inspections, especially for safety reasons. Trips to the more remote areas of Svalbard are not without risk. The rescues which the Governor has had to organise over many years are proof of that. The rescue facilities in Longyearbyen today are of the highest quality, and the tourist regulations require insurance for expeditions to remote regions to cover the expenses of potential rescue operations. In addition, the tourists must be better prepared to handle the expected risks, and the frequency of trips to the remote areas and the numbers of their participants must not exceed certain limits.



## HELICOPTER USE FROM 1985-92 by the Governor of Svalbard

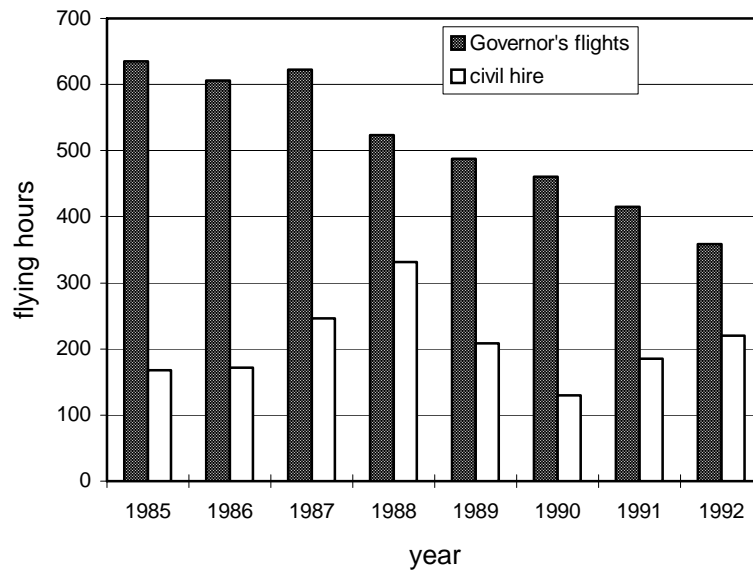


Figure 12. The use of helicopters by the Governor's office has been significantly reduced, partly because of the field patrol service in summer.

The inspection activities, too, could have an impact on the environment. Extensive use of helicopters and landings by the Governor's staff in vulnerable localities is, of course, a potential impact. However, this office is responsible for managing the environment and has always planned its activities with concern for reducing their potential impact to a minimum. One example of this is the significant reduction of inspections by helicopter (Figure 12). A substantial proportion of these inspections has been replaced by the field patrol service in summer. If the use of authorised guides becomes mandatory, this will also reduce the number of inspections needed for control reasons. The safety of tourists still requires a certain level of inspection.

### Costs

Management of tourism within the framework of sustainable use will call for a variety of measures and management actions by the authorities. The cost of this "extra" work, expanded infrastructure, etc. has to be paid for by the tourist. This is also part of "a sustainable use budget". In practical terms this will probably mean that the tourist will have to pay a significantly higher price for travelling in Svalbard in the years to come. The organised part of field tourism in Svalbard is already relatively expensive, but the greatest increase will come in unorganised tourism, which is not at all expensive now. This kind of tourism, especially short trips from Longyearbyen, also mostly has no extra costs (e.g. insurance) and is not subject to the notification system. Sustainable use and implementation of the management plan will presuppose better control of unorganised tourism in Svalbard. The unorganised tourist must also share the costs of controlling the development of tourism, otherwise sustainable use cannot be attained.

An arrangement whereby the tourist has to pay his part of the "extra" management costs will also help to limit the number of tourists. To achieve the desired effect, the cost level has to be proportional to the desired access of the various management areas in the plan.

## 7 Recommendations for sustainable development of arctic tourism

The process of preparing a management plan for tourism in Svalbard has provided experience that will be valuable for managing tourism in arctic regions in the future.

Successful long-term management requires the fulfilment of a number of factors. In the past, managers and tour operators have tended to be adversaries. One lesson to be learnt is that successful management can only take place in an atmosphere of mutual trust. If commercial tourism interests are to be integrated with environmental management concerns to achieve sustainable development, managers and tour operators must become partners. We believe that, in the long run, these two sectors have common interests. Both need clear rules to operate by and neither are interested in over-exploiting the environment. Furthermore, public management of natural resources and nature protection can only be successful in the long run if the managers have public support. Unless more people know and care about unspoilt nature, it will be very difficult to obtain the necessary political and financial support for active management. Tourism and recreation are among the most important means of creating wide support for environmental management since they expose large groups of people to the benefits of nature.

Conscious and sustainable management of wild nature requires a competent framework. We believe that the type of framework used for the Svalbard plan gives the necessary structure for a long-term sustainable development of tourism. Frameworks and plans must have goals, strategies, management actions and standards for desirable resource conditions. Since so many factors in the tourism environment system change over time, a management framework must be flexible enough to cope with change. A management plan must be able to specify which types and levels of physical, social and managerial conditions one is trying to achieve, and to evaluate how these change over time. The acceptability of environmental change is not just a scientific question, it is also a social and political issue. In other words, one has to make political and normative decisions regarding how much impact and environmental change one should accept over a given period of time.

Good frameworks and plans have many benefits. They provide rules and guidelines for future development, because they make decisions about allocation of resources. Extensive experience from recreation resource planning in different types of settings suggests that management plans have the greatest chance of success if they involve all the actors in shaping the plan and in decision making. If this is done properly, the planning process becomes an arena for co-operation and exchange between the public sector and private industry. Participatory planning is also important in terms of considering the needs of local populations in the settings where tourism occurs.

We believe a few basic principles should be followed in future work dealing with management of arctic tourism:

**Arctic environments and wilderness areas should be managed as integrated resources, not separate elements.** It is important to recognise the complexity of large areas with a mixture of resources and types of use. Comprehensive, long-term management depends on a holistic framework integrating natural and social sciences.

**Environmental protection is best achieved through the management of human influences.** Human activity is by far the most important factor in terms of impact on the environment. Successful management and protection are not achieved solely by designating protected areas, visitors also need to be directed to the types of destinations where they have the greatest probability of satisfying their needs. A happy visitor is much more likely to comply with regulations than a dissatisfied one.

**Environmental management should both protect nature and produce human benefits.** Public management agencies have an obligation to produce human benefits from recreational activities by, for instance, providing enjoyment of nature and protecting nature from unacceptable use.

**Management should be guided by plans that state objectives for specific areas.** This is to avoid policy becoming fragile and person dependent. If managers and the private sector are expected to function as partners, everyone needs clear and objective rules to play by.

**Limits to use or carrying capacities should be defined so that unacceptable changes do not take place.** Acceptable levels of use and impacts must be defined, and changes must be monitored.

**Only the minimum of regulations and management actions should be applied that are necessary to achieve objectives.** The policy of managers should be to regulate and control as little as possible, but enough to promote sustainable development.

**All who will be affected by a management process should be involved in the planning process and decision making.** Public involvement is a key condition for achieving support and success for plans and management actions.

**Environmental conditions and opportunities for recreational experiences should be monitored as part of long-term management.** A dynamic management framework depends on data input over time.

Future work on tourism management in Svalbard must try to incorporate these principles into policies and management actions. We recommend that several actions be considered in future work on sustainable development of tourism in the Arctic. All of these apply to Svalbard, but they are also sufficiently general in nature to be applicable to some degree in other parts of the circumpolar Arctic that have tourism.

Despite a good start, considerable work remains to be done in Svalbard in order to define the limits that need to be established for tourism in the Arctic if the Arctic wilderness is to be protected and sustainable use ensured. A project to define the limits in the various management areas and individual sites which are considered particularly vulnerable should be part of the programme. We believe this type of effort is needed in a number of arctic regions where tourism takes place.

A monitoring programme for the entire Arctic should be established. This must monitor impact parameters at representative sites in different regions regularly visited by tourists. Work on a monitoring programme for the effects of tourism in Svalbard will commence in 1996.

An advisory forum should be established to improve co-operation between the authorities and the tour operators.

The registration systems and databases concerned with tourism must be improved and standardised. This may form part of monitoring programmes or be separate data-gathering routines. We recommend that the programmes are made as simple and inexpensive as possible so that managers can carry out the data collection more or less as part of other field routines, yet maintain a sufficiently high scientific standard to give the necessary data.

A system of authorised guides needs to be organised and established as a mandatory part of tourism development and management.

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## Directorate for Nature Management

The Directorate for Nature Management (DN) was established in 1985, as a department under the Norwegian Ministry of Environment.

The Directorate is authorized to manage Norwegian nature through various laws and regulations. The DN is also responsible for identifying, preventing, and solving environmental problems, through cooperation, advice, and information to other authorities and public groups.

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