Models of tourist motivation

Resource T1

Crompton's model of tourist motivation

Crompton identified seven socio-economic motives that guide tourists towards the selection of a particular type of holiday or destination. Simply put these are:

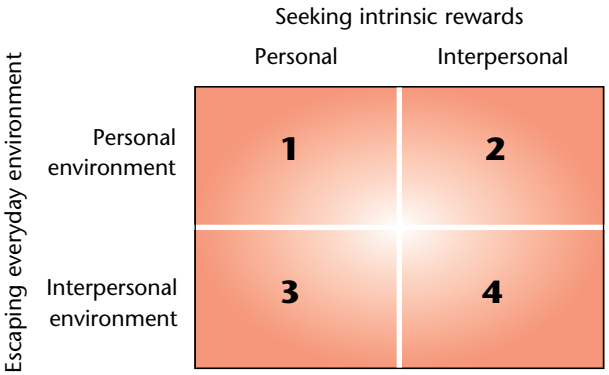
1. Escape from a perceived mundane environment
2. Exploration and evaluation of self
3. Relaxation
4. Prestige
5. Regression (e.g. less constrained behaviour)
6. Enhancement of kinship relations
7. Facilitation of social interaction (e.g. making new friends)

In most decisions several motives may be at work. For example, a French camping holiday with friends may involve 1,3 and 7 whilst a trip on Concorde may include 4 as well. You should examine how a holiday in Antarctica might be perceived by a variety of types of visitor.

Source: Based on ideas in Pearce, D. (1995) Tourism Today. Longman, Harlow

Iso-Ahola's model of tourist motivation

Iso-Ahola considered that tourism allows both 'escape from something' and a search for 'something new'. He also suggested that these motivators operated at both personal and interpersonal levels. He summarised his approach in a simple model as shown here. In it any tourist can be placed on any particular holiday – indeed the position in the model may change during the course of a holiday. Consider how things might change during an Antarctic cruise.



Source: Based on ideas in Pearce, D. (1995) Tourism Today. Longman, Harlow

Terms and conditions for travellers

given by Adventure Network International (ANI)

Antarctica, the most remote continent is one of the most inhospitable and undeveloped regions of the planet. Logistical problems are enormous, the weather ferocious and unpredictable. Distances are immense, facilities scarce. There are no corner stores, petrol stations, TV weather forecasts, emergency out-patients units, pay phones or tourist information booths. Safety and self-sufficiency are paramount. We acknowledge and respect this.

It is only fair to give clear warning to all our clients that we and everyone else attempting to function in this extreme environment, are at the mercy of forces beyond our control. A tight time-schedule in connection with an Antarctic expedition is unwise. Delays of days or weeks must be anticipated. We strongly advise that an open-dated air ticket be held for your journey home. This will provide rescheduling flexibility.

Our flights into Antarctica take six hours. They cross first the stormy Drake Passage, then the sub-Antarctic Peninsula region, notorious for its adverse climate, before entering the continental interior. We make very sure that the weather conditions en route and at Patriot Hills are suitable for safe aircraft operation for the journey in both directions. We check with all available satellite pictures en route. We are in radio contact with the Patriot Hills base camp, and await their clearance before taking off. We keep in radio contact with the crew throughout the round trip flight.

Once safely there, we are still at the mercy of the Antarctic weather. Storms do occur that can prevent local flights – and even at times, anyone leaving the tents. Again, we take safety most seriously – even at the risk of having to call off an expedition at a late stage. We must insist on having the last word on this matter – your well-being is our primary concern while you are with us.

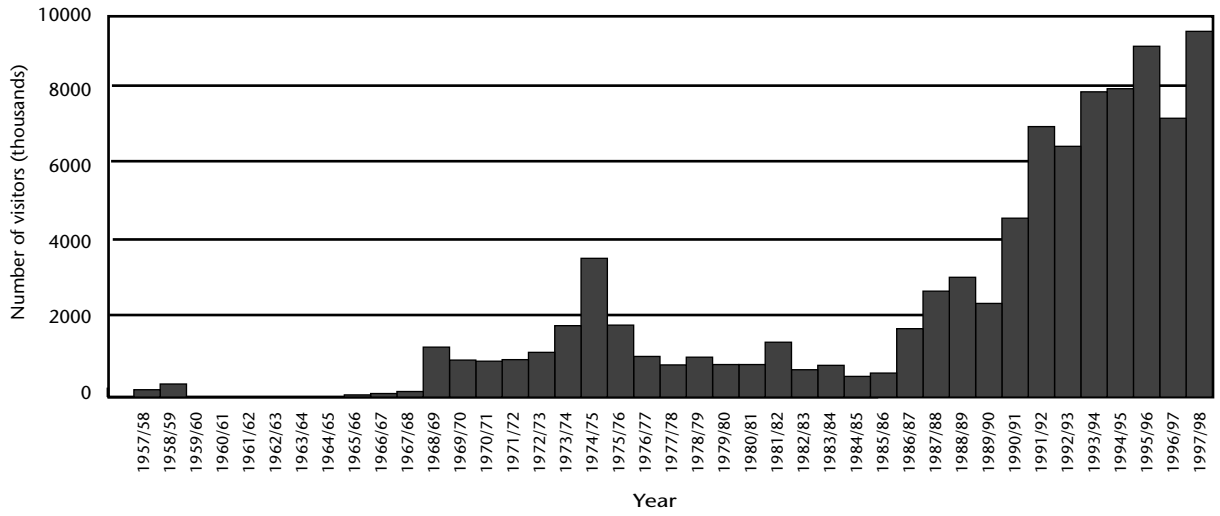
On board our flights, clients are required to respect the authority of the captain and comply with his instructions. In camp, ANI's Field Operations Manager is given authority and responsibility for the safety and comfort of all clients and staff. During field operations, Lead Guides are delegated similar responsibility for all participants of the expedition in their care.

Source: Adventure Network International

Statistics on Antarctic tourism

Resource T2

Numbers of visitors to Antarctica, 1957/58 to 1997/98



Most visited sites on the Antarctic Peninsula

Site	1996/97
Cuverville Island	3714
Hannah Point	3480
Port Lockroy	3110
Whaler's Bay, Deception Island	3012
Paulet Island	2808
Pendulum Cove, Deception Island	2725
Petermann Island	2576
Alte Brown Station	2504
Half Moon Island, S. Shetlands	2258
Gon. Videla Station	1095

Ships visiting the Antarctic in 1997/98

Ship	Flag	Charter company	Maximum passenger capacity	Typical number of passengers per trip	Number of trips
Akademik Shuleykin	Russia	Marine Expeditions	45	40	11
Akademik Iloffe	Russia	Marine Expeditions	80	70	11
Prof. Multanovskiy	Russia	Marine Expeditions/ Mountain Travel-Sobek	40	34	4
Prof. Molcharnov	Russia	Quark Expeditions	48	45	3
Disko	Denmark	Marine Expeditions	92	72	11
Explorer	Liberia	Explorer Shipping Co.	100	78	9
World Discoverer	Liberia	Society Expeditions	138	120	9
Bremen	Bahamas	Hapag-Lloyd Cruise	164	140	6
Hanseatic	Bahamas	Hapag-Lloyd Cruise	180	150	5
Vista Mar	Panama	Plantours and Partner	300	280	2
Marco Polo	Bahamas	Orient Lines	800	465	4

Nationality of Antarctic tourists

Country	1996–97	%
US	3503	47.8
Germany	777	10.6
Australia	680	9.3
Japan	510	7.0
United Kingdom	475	6.5
Switzerland	280	3.8
Canada	254	3.5
Sweden	102	1.4
France	93	1.3
Austria	78	1.1
Others	561	7.7
Unknown	9	0.1
Totals	7322	

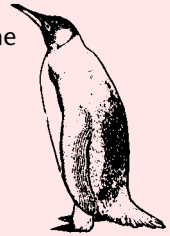
Source: IAATO for all tables and bar graph

Some tourism experiences in Antarctica

Resource T3

A typical cruise itinerary

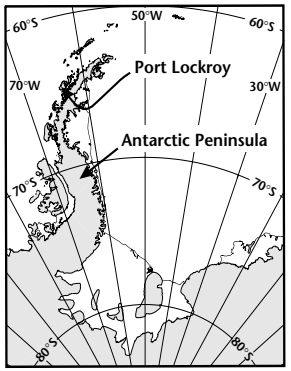
Day 1	Depart Ushuaia, Argentina
Day 2	At sea, crossing Drake's passage
Day 3	At sea, first landfall (e.g. Elephant Island)
Day 4	Visit South Shetland Islands – land using 'Zodiac' inflatable boats – see seals and birds. Visit to Arktowski (Polish station)
Day 5	Deception Island to see relics of whaling industry, penguin colonies and volcanic landscape
Day 6	Continue south visiting the Antarctic Peninsula to set foot on the mainland and cross the Antarctic Circle
Day 7	At sea, crossing Drake's passage
Day 8	Return to Ushuaia



A typical day on a cruise in Antarctica

08.00	Breakfast with briefing
10.00	First landing by 'Zodiac' (inflatable boat)
12.00	Lunch
14.00	Second Landing
16.00	Tea and rest period
19.00	Dinner
20.00	Third Landing
22.00	Bar – Recap (review of the day's experiences followed by a question and answer session)

Port Lockroy



Port Lockroy, on the Antarctic Peninsula, is a beautiful natural harbour offering shelter and a secure anchorage to large vessels. After its discovery in 1903, it was used by whalers and a number of early Antarctic expeditions.

During the Second World War, a British base was established at Port Lockroy as part of 'Operation Tabarin'. This was a top-secret Royal Navy operation designed to provide intelligence on German naval movements, meteorological information and a strategic British presence. The expedition was led by Commander James Marr. The base was built on Goudier Island and began operation on 16 February 1944 with eight men in residence. The following year 'Operation Tabarin' became the Falkland Islands Dependencies Survey (FIDS), which operated the base until it was closed in January 1962. The station was usually occupied by 4 to 9 people including scientists, a surveyor, mechanic, radio operator and a handy-man. The normal tour of duty lasted two and a half years. Following its closure the base became derelict and for many years few people visited it.

In the 1980s, yachts exploring the Antarctic Peninsula used Port Lockroy as an anchorage. At this time the number of tourist vessels visiting the site increased and most visitors landed at Jougla Point (see map in Resource T4) as the buildings on Goudier Island had become hazardous. Following a survey of abandoned British bases in 1994 by the UK Antarctic Heritage Trust (UKAHT), Port Lockroy was designated a Historic Site under the Antarctic Treaty in 1995. A conservation team renovated the buildings in 1996.

Dr N. Cobley/BAS

Port Lockroy in 1997 with the Fief Range of mountains in the background

Currently, Port Lockroy is operated during the austral summer months (November to March) by a two person team working for the UKAHT. They continue building conservation work, carry out long-term monitoring of the wildlife and open the base to visitors.

Port Lockroy has proved highly popular with both the tour industry and with tourists. The area is attractive scenically, with a chain of mountain peaks and a glacier forming the backdrop to the base. There are numerous gentoo penguin colonies. Several relics of the whaling industry, such as whale bones and old anchor chains, can be seen. Following the cleanup and conservation of the base buildings, interpretative material was put up, giving visitors an idea of what life was like on a research station in the 1950s. The UKAHT team also guides visitors around the site, providing additional interpretation. The base is also a Post Office and visitors can purchase stamps and mail cards and letters home. Along with the modest sale of souvenirs, this makes the project self-financing.

Impacts of tourists on penguins

Resource T4

Dr N. Cobley/BAS

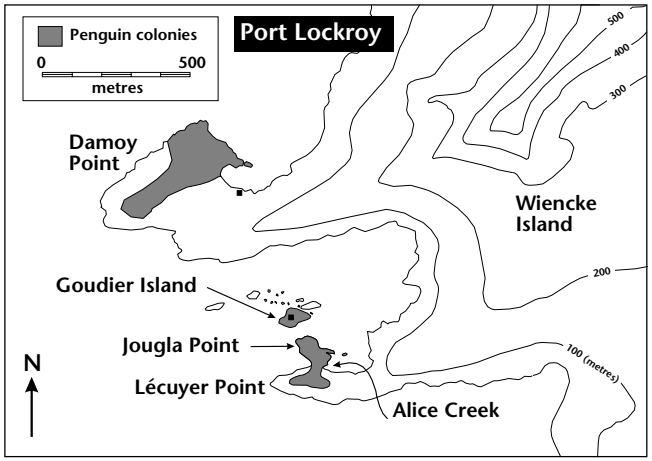
Nesting gentoo penguin on Goudier Island, Port Lockroy

Long term population trends between sites

The gentoo penguin *(Pygoscelis papua)* colonies at Alice Creek and Damoy Point (Port Lockroy, Antarctic Peninsula) are on peninsulas 700 m apart. Both have a similar number of breeding pairs of penguins, but Alice Creek has many more visitors than Damoy Point (see table below).

Year	Alice Creek visitors	Damoy Point visitors
1962–89 (total period)	1000	100
1989/90	796	20
1990/91	1067	20
1991/92	2615	20
1992/93	2139	20
1993/94	4274	20
1994/95	1769	321
1995/96	3851	597
1996/97	4334	92
1997/98	6429	453

The numbers of breeding pairs of gentoo penguins has increased significantly at both sites since the 1950s. There is also a significant positive correlation between the population size of the two colonies. These data suggest that the processes driving gentoo penguin population changes at Port Lockroy have not been appreciably influenced by tourist visits.



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Port Lockroy showing the location of the gentoo penguin colonies

Population trends within a site

At Alice Creek, the penguin colonies are naturally divided into two groups by an isthmus. Tourists land at one of two sites on the Jougla Point side of the peninsula and the majority remain at the colonies near the landing area. The other side of the peninsula, at Lécuyer Point, is much less visited because it is further from the landing area and at a higher elevation, which restricts access to more active visitors.

If tourist visits are adversely affecting the gentoo penguin colonies, we would predict that the increase in numbers should be unevenly distributed, with the colonies at Lécuyer Point growing at a higher rate than the more frequently visited ones at Jougla Point. We analysed 9 years of data spanning four decades, and found no significant difference in the rate of growth of the two groups of colonies.

Population trends and breeding performance at a frequently visited colony (Goudier Island)

Population

The British base at Port Lockroy (Base A) was set up on Goudier Island (see map) in 1944. It was occupied throughout the 1950s, eventually closing in 1962. During its operation gentoo penguins were discouraged from nesting on Goudier Island, and at Alice Creek and Damoy Point. Eggs were collected for food by the base personnel and visiting ships' crews. After the base was abandoned, a few visits were made by scientists and yacht crews during the 1970s and 1980s enabling the recolonisation of Goudier Island by gentoo penguins to be recorded. Although there seems to have been a period of about 20 years before the birds returned in 1985, subsequently the colony has grown rapidly to 700 pairs in 1997.

Breeding performance

Following the restoration of the British base in 1995–96, tourist ships started visiting Goudier Island. During the first full season of operation (1996/97) some 4300 tourists visited the island, and walked around some of the nesting gentoo penguins under the supervision of their tour leaders. The intensity of visits during the penguin nesting cycle is shown on the bar chart on the next page.

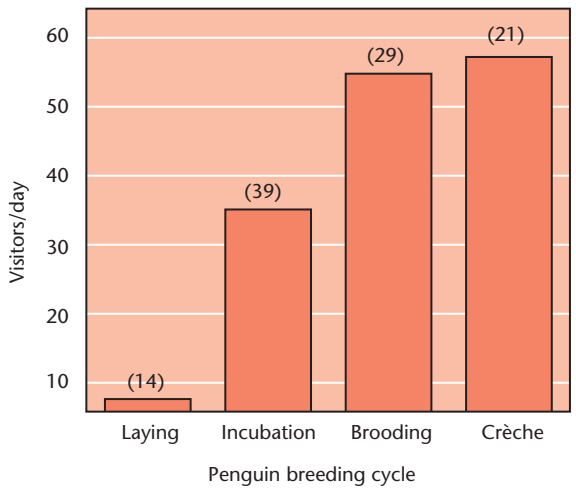
Numbers of visitors

The ten small colonies on Goudier Island afforded an opportunity to compare the effects of visitor disturbance on six colonies near the landing site and base, with four control colonies at the other side of the islet, some of which were out of sight of the visitors. We asked visitors not

to go near the control colonies (minimum approach distance 25 m), although they were free to approach the treatment colonies under the supervision of their tour leaders and following Antarctic Treaty guidelines. At each colony we recorded the numbers of breeding pairs, the clutch size, hatching success, and brood size. There were significant differences between treatment and control colonies only in clutch size (smaller in treatment) and brood size (smaller in control). However, clutch size was also related to colony position and colonies with smaller clutches occupied lower lying areas, or were in the lee of buildings or rock outcrops. Since there was an unusually high amount of snow cover in 1996/97, some of these pairs may still have been laying at the time of the census.

In two colonies (a treatment and a control), the chicks in a sample of 10 nests were weighed at hatching and after 20 days old when they started to leave the nest prior to crèching. There were no differences in chick mass or survival up to 20 days old between the colonies. The overall breeding success (chicks fledged per pair) was 1.0–1.1 chicks/pair assuming a mortality of 20% between crèching and fledging. This is similar to the productivity of other (undisturbed) southern gentoo populations.

Visitor frequency to Goudier Island, 1996/97 (number of days in brackets)



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Dr N. Cobley/BAS

Tourists visiting the old British station at Port Lockroy

Conclusions

- The long-term population trend of gentoo penguins at both Alice Creek (frequently visited by large numbers of tourists) and Damoy Point (infrequently visited and only by a few tourists) has been increasing.
- There is a strong positive correlation between the numbers of breeding pairs at Alice Creek and Damoy Point.
- At Alice Creek, a comparison of population trends between an area of high visitor exposure (Jougla Point) and low visitor exposure (Lécuyer Point) revealed no significant difference in the rate of increase.
- An intensive study of breeding performance on Goudier Island in 1996/97 when over 4300 tourists walked past treatment colonies, found no effect on laying, hatching success, brood size, chick growth or survival up to 20 days of age, compared with undisturbed control colonies. Although some treatment colonies showed a higher proportion of single egg clutches, this was related to colony location and unrelated to brood size suggesting factors other than visitor disturbance were responsible.
- The overall breeding success (chicks fledged per pair) of gentoo penguins at Goudier Island in 1996/97 was similar to values previously reported for other (undisturbed) southern gentoo penguin populations, after correcting for mortality between crèching and fledging.

Human disturbance and long-term changes in Adélie penguin populations: a natural experiment at Palmer Station, Antarctic Peninsula

Human activities (tourism and research) near Palmer Station, Anvers Island, Antarctic Peninsula, have increased significantly since 1975. Although these activities were focused on the large, easily accessible populations of Adélie penguins on Litchfield and Torgersen islands, Litchfield Island became a Specially Protected Area (SPA) in 1978. This ended tourism on the island and reduced research-related activity to negligible levels. Despite SPA status, the total breeding population of Adélie penguins on Litchfield Island decreased by 43% between 1975 and 1992. In contrast, on Torgersen Island, where tourism and research-related activities continued to increase over the same time period, the decrease in these populations was only 19%. There is increasing concern that tourism and other human activities may adversely impact Antarctic wildlife populations. Although this concern may be justified for some types of human activity, our data suggest that the potentially adverse effects of tourism and research may be negligible relative to the effects imposed by long-term changes in other environmental variables.

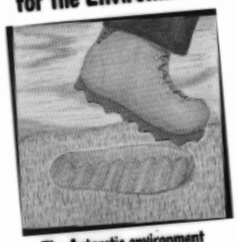
Source: Fraser, W. R. and Patterson, D. L. in Battaglia, B., Valencia, J. and Walton, D. W. H. (Eds) (1997) Antarctic communities: species structure and survival. Cambridge University Press, Cambridge.

Visitors guide and objectives of IAATO

Resource T5

Visitors' Guide To The Antarctic

Care for the Environment



The Antarctic environment can easily be damaged. Please respect it.

- Plants are rare, fragile and slow growing. Avoid walking on moss and lichens. It takes years for these to recover.
- Do not collect organic matter such as lichens and mosses.
- If birds or seals react to your presence, you are too close. Keep your distance!
- Allow fossils and rocks to remain undisturbed.
- Keep to established tracks or trails. Avoid walking on undisturbed ground.
- Be sensitive in the way you take photographs. Do not disturb plants or animals to enhance your pictures.

Litter and Human Impact

In Antarctica it can take decades for human trash or artifacts to break down.

- Take all your litter with you.
- Do not throw litter overboard from ships.
- The Antarctic Treaty's Code of Conduct on Waste Management provides solid guidance on minimizing adverse effects of human presence.
- Avoid trampling of sites.
- Please respect historic sites. They are protected by the Antarctic Treaty.
- Emergency depots and refuges must not be disturbed.

Safety

Antarctica is a very hazardous place.

- Be alert!
- Plan your activities with safety in mind at **all** times.
- Be prepared to survive in the cold.
- Be self-sufficient in your plans and the equipment you carry.
- Do not expect a rescue service.
- Learn about Antarctic hazards.
- Always stay with your group.

Science Stations and Programs

Research in Antarctica is making a special contribution to international understanding of the globe.

- Check with the station managers in the area you are visiting **before** you visit Antarctica. They can inform you of their activities.
- Stations are home for antarctic personnel. Please respect their property and privacy.
- Do not disturb sites where scientific research is going on.
- Check on the research activities that are underway in the area you are visiting.
- Do not automatically expect support from research stations. They are not set up as visitor hostels.

Council of Managers of National Antarctic Programs

International Association of Antarctica Tour Operators Objectives

IAATO is dedicated to appropriate, safe and environmentally sound private-sector travel to the Antarctic. Its objectives are to:

- Represent Antarctic tour operators and others organising and conducting travel to the Antarctic to the Antarctic Treaty Parties, the international conservation community and the public at large.
- Advocate, promote and practice safe and environmentally responsible travel to the Antarctic.
- Circulate, promote and follow the Guidance for Visitors to the Antarctic and Guidance for Those Organising and Conducting Tourism and Non-governmental Activities in the Antarctic, as adopted by the Antarctic Treaty System (Recommendation XVIII-1).
- Operate within the parameters of the Antarctic Treaty System, including the Antarctic Treaty and the Protocol on the Environment and Annexes, along with MARPOL, SOLAS and similar international and national laws and agreements.
- Foster continued cooperation among its members and to monitor IAATO programs, including the pattern and frequency of visits to specific sites within the Antarctic. And to coordinate itineraries so that no more than 100 people are ashore at any one time in any one place.
- Provide a forum for the international, private-sector travel industry to share expertise and opinions and to uphold the highest standards among members.
- Enhance public awareness and concern for the conservation of the Antarctic environment and its associated ecosystems and to better inform the media, governments and environmental organisations about private-sector travel to these regions.
- Create a corps of ambassadors for the continued protection of Antarctica by offering the opportunity to experience the continent first hand.
- Support science in Antarctica through cooperation with national Antarctic programs, including logistical support and research.
- Foster cooperation between private-sector travel and the international scientific community in Antarctica.
- Ensure that the best qualified staff and field personnel are employed by IAATO members through continued training and education. And to encourage and develop international acceptance of evaluation, certification and accreditation programs for Antarctic personnel.

IAATO

Tourism in Antarctica

Worksheet 15

Although Antarctica is not usually thought of as a holiday destination, almost 10,000 tourists now visit the continent during each austral summer. Tourists first visited Antarctica in 1958, but only since the mid-1980s have their numbers increased. Antarctic tourism raises many issues. Of particular concern is how to protect the Antarctic wilderness while giving people the opportunity to experience its beauty for themselves. At one extreme, it has been suggested that tourism will inevitably lead to the degradation of the Antarctic environment and should be stopped. An alternative argument is that everyone has the legal right to visit the continent. This worksheet examines the factors which motivate people to go to the Antarctic, the way Antarctic tourism is currently conducted and managed, and some research on the environmental impact of tourists on penguins.

Why visit Antarctica?

The Antarctic is cold, windy and remote. Why should anyone want to go on holiday there? The answers can be found by your own investigations and an examination of models of tourist motivation.

Task 1 Conduct a survey in your class, school or local community. Ask the following questions:

- Where did you go on your last three holidays?
- Why did you go there? (Consider factors of price, availability, accessibility, timing, advertising, climate, beaches, nightlife, food, people, scenery, etc.)
- Which three destinations in the world would you choose to visit if time and money were not a problem? Why?

Analyse your answers. Draw bar graphs showing the number of people who went, or wanted to go, to particular destinations. Which were the most visited destinations? Why? Where would people most like to go? Did anyone choose Antarctica? Why?

Although your survey might have provided you with interesting general information about people's holidays, it might not have told you much about Antarctica. An examination of theoretical models about tourist motivation might help to explain why people choose to go there. Resource T1 shows two such models.

Task 2 Look at Crompton's model in Resource T1. List the seven motives in rank order for a holiday in Antarctica (rank 1 being the motive that Antarctica would best meet). Now look at Iso-Ahola's model, which examines motivation differently. He saw it as a combination of escape from one environment and a search to experience another.

With reference to an adventure holiday in Antarctica (e.g. climbing the Vinson Massif) place it in one of the boxes of the Iso-Ahola model. Explain your reasons. Would a ship cruise to the Antarctic Peninsula be similar? Again explain your reasons.

Fill in the speech bubbles around the cartoon tourist in Resource T1 with the reasons you might have about wanting to go to Antarctica (e.g. "I want to see penguins").

BAS

Tourists visiting a king penguin colony on South Georgia

The development of the Antarctic tourism industry

Although the first tourists arrived in 1958, their numbers were small. This remained the case until the mid-1980s when many ice-strengthened vessels became available for charter cheaply following the breakup of the Soviet Union. There has also been a growing public awareness of, and interest in, Antarctica. This may be partly due to media reports and TV wildlife documentaries like the BBC's *Life in the Freezer*.

Task 3 Look at the bar graph in Resource T2 showing visitor numbers from 1957/58 to 1997/98. Comment on the trends. How do the overall numbers compare with more well known tourist destinations in the UK (e.g. Madam Tussaud's in London has just under three million visitors each year)?

Look at the figures which show the breakdown of visitors by nationality for 1996/1997 in Resource T2. Construct a pie chart with the data. Why do so many people from the US go to Antarctica (consider affluence, accessibility, holiday preferences)?

What are Antarctic holidays like?

Most tourists arrive on ships, which sail between the 'gateway' ports (e.g. Ushuaia in Argentina, Christchurch in New Zealand, Hobart in Australia, and Stanley in the Falkland Islands) and Antarctica. Cruises normally last between 7–14 days.

Task 4 Resource T2 shows some of the ships that visited Antarctica in 1997/98. Comment on the nationality of the ships and suggest reasons for this. Which three ships made the most visits? What is the maximum number of passengers the *Marco Polo* can carry? How does this compare with the typical number of passengers it carries in Antarctica? ➤

Task 4 ➤ Why is there a difference?
Most tour ships depart from Ushuaia. Find Ushuaia in an atlas. Why is this port so popular?

The majority of tour ships sail to the Antarctic Peninsula during the austral summer months of December to February.

Task 5 Resource T2 shows the most visited sites on the Antarctic Peninsula in the 1996/97 season. Find these locations on the map in Resource N1 and in an atlas. Draw a pie chart showing the proportion of visitors going to each site. Using the map, table and your pie chart, suggest reasons for the popularity of each site.

Task 6 Look at Resource T3 which shows a typical 8 day cruise itinerary, and a typical day in Antarctica. What percentage of the cruise is spent travelling to and from Antarctica? Read the description of Port Lockroy in Resource T3. Which parts of an Antarctic cruise might tourists enjoy most?

BAS

The MS *Explorer*, one of the smaller Antarctic tourist ships

Adventure tourism

Not all tourists visit Antarctica in the comfort of tour ships. A hardy few sail yachts to the continent. Others wish to climb mountains or walk to the South Pole and they use the services of Antarctica's only land-based tour company – Adventure Network International (ANI). In the 1997/98 season, ANI flew 131 tourists from Punta Arenas in Chile to their summer base at Patriot Hills in the Ellsworth Mountains.

Task 7 Suggest reasons why adventure tourism is less popular than tour ship cruising. Look at Resource T1 and read the Terms and Conditions given to potential clients by ANI. Who would find this type of holiday difficult? Consider reasons of affluence, age, health and family commitments.

Overflights

Overflying Antarctica without landing can also let people see the continent. The Australian airline Quantas operates special overflights using Boeing 747 aircraft and took 3,146 passengers in 1997/98.

Task 8 What might be the problems of overflights? Consider safety, environmental impact and flight times to Antarctica.

What are the environmental impacts of tourism?

There has been increasing concern about the impact of tourism on the Antarctic environment.

Task 9 Read the paper on Gentoo penguins in Resource T4. Create a set of bullet points that summarises the main findings of the paper. Port Lockroy may not be representative of other sites that tourists visit. Read the abstract of a paper on Adélie penguin disturbance at Palmer Station (US), to the south-west of Port Lockroy, also shown in Resource T4. What conclusion does it reach?

Research is still at an early stage and it is not yet clear if tourism is harmless. The detailed studies at Port Lockroy were made in successful breeding years, and all the studies to date have only looked at penguins.

Task 10 Draw up a table listing possible impacts of tourism. In the first column identify the potential impacts, in the second column suggest the part of the environment at risk and in the third column suggest how the impact could be minimised. Use of Worksheet 14 on Environmental Protection should help you.

How can tourism be managed in the Antarctic?

Visitor guidelines already exist for tourists going to Antarctica (see Resource T5). However, since scientific research on the effects of Antarctic tourism is limited, the guidelines are based on subjective assessments of the possible problems. Given the recent entry into force of the Environmental Protocol and the multinational nature of the tour industry, self-regulation has been the only practical option so far. In 1991, seven tour companies formed the International Association of Antarctica Tour Operators (IAATO). IAATO now includes almost all of the tour companies operating in the region. IAATO also represents the tourist industry at annual Antarctic Treaty meetings.

Task 11 Read the objectives of IAATO in Resource T5. Write a set of bullet points showing the advantages and disadvantages of the self-regulation of the Antarctic tourist industry. How might tour companies be regulated if they are not IAATO members? What action could be taken against tourists who infringe the guidelines? Is it useful for the industry to be represented by one organisation?

Task 12 Review the resources in this worksheet and suggest how tourists might assist in the long-term conservation of Antarctica.