ANTARCTIC TREATY
XXI CONSULTATIVE MEETING

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ДОГОВОР ОБ АНТАРКТИКЕ
XXI КОНСУЛЬТАТИВНОЕ СОВЕЩАНИЕ

ENVIRONMENTAL IMPACT ASSESSMENTS FOR ANTARCTIC TOURIST ACTIVITIES

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Agenda item 6b

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ENVIRONMENTAL IMPACT ASSESSMENTS FOR PROPOSED TOURIST ACTIVITIES IN ANTARCTICA

1. Introduction

(a) In accord with requirements of the Environmental Protocol, and existing regulations and procedures prior to the Protocol, IAATO-member companies continue to conduct a variety of environmental evaluations for their proposed activities. These evaluations have consisted Environmental Audits, Initial Environmental Evaluations (IEEs), Preliminary Environmental Assessments and permit applications. Companies conducting shipborne tourism, airborne activities and overflights have conducted environmental assessments of potential impacts. A summary of environmental assessments in presented in Attachment A. Most of the documents have been tabled by IAATO and Treaty Parties since ATCM XVIII.

(b) IAATO held an international workshop on environmental assessment, September 27-29, 1996, "IAATO Workshop on Environmental Assessment, Building the Frame" attended by IAATO-member environmental officers, IAATO Secretary, outside consultants and representatives from the U.S. National Science Foundation and Office of Federal Activities at the U.S. Environmental Protection Agency.

(c) As the Environmental Protocol nears ratification, IAATO members are developing a programmatic environmental assessment for shipborne activities in the Antarctic Peninsula and South Shetland Islands. A draft outline of Terms of Reference for this document follows, intended to comply with the U.S. Environmental Protection Agency Interim Final Rule for Environmental Assessment of Nongovernmental Activities in Antarctica issued April 30, 1997 (available online at http://es.inel.gov/oeca/ofa/).

2. INITIAL ENVIRONMENTAL EVALUATION (IEE) for IAATO-Member Shipborne Tourism to the Antarctic Peninsula & South Shetland Islands

(a) Following the IAATO Workshop on Environmental Assessment, here is a DRAFT OUTLINE of the terms of reference for the Initial Environmental Assessment of commercially-organized shipborne tourism activities to the Antarctic Peninsula and South Shetland Islands by IAATO-member companies.

(b) This document is intended to fulfill obligations of Annex I of the Environmental Protocol and the "Interim Rule on Environmental Assessment of Nongovernmental Activities in Antarctica," issued by the Office of Federal Activities of the U.S. Environmental Protection Agency on April 30, 1997.

(c) IAATO notes that on May 6, 1997 the EPA issued a "Notice of Intent" to solicit expert opinion on its regulations at http://es.inel.gov/oeca/ofa/. This "Notice of Intent" includes the announcement of a scoping session on Tuesday, July 8 1997 in

Arlington, Virginia. Interested parities may contact Joe Montgomery or Katie Biggs at the EPA for more information.

(d) Antarctic tourism is international with organizers, tourists and ships from many nations. IAATO members continue to advocate a uniform set of standards for documentation of potential adverse environmental impacts of Antarctic activities. Its members operate under the strong principle that appropriate documentation submitted to one appropriate national authority should satisfy obligations imposed by all Antarctic Treaty Parties. The potential for creating a system of redundant, time consuming documentation is great.

(e) To this end, IAATO is submitting this following draft outline as ATTACHMENT B for consideration by the Parties. Written comment may be submitted to the IAATO Secretariat (111 East 14 Street, No. 110, New York, NY 10003 USA).

3. Criteria for Site Selection

(a) Following the Airlie Workshop, IAATO compiled a brief outline of the process by which its expedition leaders use to select sites.

(b) This outline presents the flexible, opportunistic process by which expedition leaders select and manage landing sites.

(c) IAATO is submitting this following draft outline as ATTACHMENT C for consideration by the Parties. Written comment may be submitted to the IAATO Secretariat (111 East 14 Street, No. 110, New York, NY 10003 USA).

ATTACHMENT A

Partial summary of EIAs prepared for tourism activities in Antarctica

Operator	*Title of EIA*
IAATO	Initial Environmental Evaluation for IAATO-Member Shipborne Tourism to the Antarctic Peninsula and South Shetland Islands (in process; draft terms of reference follows). U.S.A.
ANI/Polar Logistics	Initial Environmental Evaluation - Dronning Maud Land Air Link (in process). U.K., SOUTH AFRICA
IAATO Members	Initial Environmental Evaluation for Tourist Cruises in the Antarctic. Required for Swedish citizen who visits Antarctica since the Swedish Antarctic Act entered into Force April 1, 1994. SWEDEN
Southern Heritage	Initial Environmental Evaluation for Southern Heritage Expeditions 1997/98 Antarctic Cruise Programme Akademik Shokalski. NZ
Aurora Expeditions	Preliminary Assessment of Environmental Impacts, Voyages to the Antarctic Peninsula December 1996-January 1997, Expedition for Climbers and Photographers to the Antarctic Peninsula, February 1997. AUSTRALIA
Quark Expeditions	Preliminary Assessment of Environmental Impacts, Visits to Macquarie Base, Cape Denison Historical Sites, Mawson, Davis and Casey Bases during 1996/97 and 1997/98. AUSTRALIA
One Step Beyond	Preliminary Assessment of Environmental Impacts for One Step Beyond January 1997 (camping Permit Application). U.K.
ANI/Polar Logistics	Preliminary Assessment of Environmental Impact-Dronning Maud Land Air Link. 1996
Hanseatic Cruises	Fragebogen zur Prüfung der Umweltverträglichkeit fur Antarkktisresisen, MS/ Bremen, MS Hanseatic Antarktissaison 1996/97. Alfred Wegener Institut. GERMANY
Marine Expeditions	Initial Environmental Evaluation o: Antarctic and Southern Ocean Seaborne Tourism of Marine Expeditions, Inc. Revised July 1996
Orient Lines	Initial Environmental Evaluation: Marco Polo Antarctic Cruises, 1995-1996
Adventure Consultants	Initial Environmental Evaluation - Vinson Massif, Mount Tyree. 1995. NZ
Qantas/Croydon	Initial Environmental Evaluation of Overflights. AUSTALIA

ATTACHMENT B
Draft Outline

INITIAL ENVIRONMENTAL EVALUATION (IEE)

for

IAATO-Member Shipborne Tourism to the Antarctic Peninsula & South Shetland Islands

to be submitted to the Office of Federal Activities, U.S. Environmental Protection Agency by the International Association of Antarctica Tour Operators

1. PROPOSED ACTIVITY

1.1 Purpose and value of Antarctic tourism

1.2 General description of the environment (ref. other documents)

1.3 Scope of proposed activities
- Location
- Duration
- Intensity (number and frequency of tourist expeditions)
- Nature of activities (i.e. which activities NOT included in this IEE)

NOTE: *Above text to refer to included tables of:*

(a) all included tours planned for the 1997-98 season, with information as required by EPA Interim Rule §8.4(a) (1)-(5)

(b) expected landing sites that may be used as part of these tourist expeditions. EPA Interim Rule §8.4(a) (6)

2. ALTERNATIVES TO PROPOSED ACTIVITY

NOTE: *This section is a brief description of conceptually feasible alternatives; a discussion of impacts follows*

2.1 Changes to tour itineraries: alternative ship routes and landing sites

2.2 Changes to number, frequency and duration of site visits

2.3 Changes to types, sizes and/or number of vessels, number of expeditions

3. IMPACTS OF PROPOSED ACTIVITY

NOTE: *Potential adverse environmental impacts to be discussed briefly but candidly in this section without reference, at this point, to proposed mitigation measures. Impacts can be classified in a variety of ways; this approach, and this outline in general, use terminology and categories consistent with CEQ's NEPA Regs, 40 CFR, §1500-1800*

3.1 Direct Impacts

3.11 Shipboard operations

- Air and water quality impacts
- Impacts on marine flora and fauna

3.12 Small boat operations

- Air and water quality impacts
- Impacts on marine flora and fauna

3.13 Landing and shore operations

- Air and water quality impacts
- Impacts on bird colonies, seals and other terrestrial fauna (including rare or endangered species)
- Impacts on intertidal flora and fauna
- Impacts on other terrestrial resources -- geologic, aquatic, aesthetic, scientific

3.2 Indirect and Cumulative Effects

NOTE: *Long-term build-up of pollutants, possible changes in behavior or distribution of plant assemblages and colonies of repeated tourist visits and/or other human activities over time to be discussed*

- Air and water quality
- Biological communities
- Other potential effects on local climate, weather, physical resources (per EPA Interim Rule §8.4(b)

3.3 Impacts of alternatives

NOTE: *The purpose of this section is not to go through a tedious discussion of each of the stated alternatives, but to make the point that each of them, separately or in combination, represent options for expedition planners to consider in designing tours so as to avoid or reduce*

adverse environmental impacts and also to enhance the quality of the tours for the participants. Consideration of these alternatives will be based in large part on feedback from the mitigation and monitoring measures discussed immediately below. Some illustrative examples of how one or more such alternatives might be utilized should be included here.

4. MITIGATION AND MONITORING OF POTENTIAL IMPACTS

4.1 General

- Cite relevant laws and regulations and voluntary guidelines
- Describe itinerary planning and management
- Summarize site selection and management criteria
- Cite examples of coordination and consultation with authorities

4.2 Shipboard Operations

- Compliance with provisions of MARPOL, SOLAS, Antarctic Treaty System, as well as other pollution control, spill and emergency provisions
- Educational and safety programs (passengers, staff and crew)
- Monitoring and reporting procedures

4.3 Small boat operations

- Training and education (passengers, staff and crew)
- Accident and spill contingency measures
- Measures to minimize impacts on marine biota

4.4 Landing and shore operations

- Education to minimize disturbance of birds, seals, other flora and fauna
- Supervision of passengers
- Site selection and management
- Safety provisions including communications and emergency rescue
- Sanitation and pollution control measures
- Procedures for site monitoring and evaluation

5. SUMMARY AND CONCLUSIONS

NOTE: *Summarize the overall activity describing how it has built-in, flexible provisions for monitoring designed and intended to assure that the activity will have no more than minor or transitory impacts on the Antarctic environment. An annual evaluation of reports and*

information gathered through monitoring will be carried out to ensure compliance and to identify any need for change in the scope or operation of these tours.

6. REFERENCES

7. ATTACHMENTS

- List of preparers
- Maps
- Table of scheduled shipborne commercial expeditions
- Contact information for IAATO-Member companies
- Standard reporting form
- Form for site selection and evaluation

ATTACHMENT C

CRITERIA USED BY EXPEDITION LEADERS IN ITINERARY PLANNING AND SITE SELECTION FOR EXPEDITION CRUISING IN THE ANTARCTIC [PENINSULA].

A. Introduction

1. Selecting sites to visit during each shipborne tourist expedition to the Antarctic Peninsula occurs in two phases. Phase one involves initial itineraries being planned and circulated to other tour ships prior to the commencement of the expedition. The second phase involves adjustments to the initial itinerary on a day to day basis as a result of conditions and opportunities encountered en route.

2. With the majority of the companies, both phases of the detailed itinerary planning and site selection are implemented by the Expedition Leader. Though in some cases the company running the ship carries out the phase one planning, the expedition leader being responsible only for phase two, the criteria used in the decision making process does not vary significantly.

3. This report details the criteria considered in the decision making process for both phases. Section B deals with phase one. It concentrates on the decision making process involved in selecting sites in the context of the voyage as a whole. Section C assesses phase two, detailing criteria used when considering landing passengers at a specific site.

B. Phase One : Planning

1. Phase one, the initial itinerary, is concerned with site selection in the context of a voyage as a whole. The aim is to achieve an expedition that gives passengers an overview of the area being visited

2. Certain parameters, such as number of days in the Antarctic region and the marketing emphasis, *e.g.* ice cruises, historical expeditions *etc.* are set in site selection. Other factors which dictate itinerary planning are vessel speeds and the number of passengers involved.

3. There are a number of requisite sites or features to be incorporated into an itinerary (though these may be influenced by the marketing emphasis). These features are:

   - **visits to renowned sites** *e.g.* Deception Island, Paradise Bay and Lemaire Channel;
   - **'key' components of the natural history** *e.g.* specific bird and marine mammal spp. geologic features, *etc.*;
   - **a landing on the Antarctic continent;**
   - **sites of historic interest**, both exploration and sealing and whaling;
   - **a visit to a scientific station.**

   The extent to which each of these aspects are emphasised varies according to the personnel involved and time constraints.

4. Often several sites meet the criteria listed above. The decision of which site to visit and at what stage in the expedition depends on several factors. Two key principles are:

   a) **to start with landings which are 'simple'**. In this instance, simple can be defined as sites which : are usually sheltered, both at the vessel's gangway and at the landing point; have ample space near the landing point for passengers to adjust to the environment and operation procedures (adjustments to clothing and equipment *etc.*) without disrupting the wildlife; and, are safe and easy to move around.

   b) **to manage expectations**, i.e. to try to ensure that each day is 'better' than the day before. Often areas which have a high species diversity , spectacular scenery or unusual occurrences are perceived as 'more exciting'. Equally, such areas often require better understanding of the codes of conduct because of: increased awareness of the biota and potential for disturbance; safety reasons; or proximity to protected areas.

5. Final decisions in selecting routes and sites are based on local knowledge of the areas involved, taking into account the site's attractions and how they fit in with what has been experienced and will be experienced.

6. The overall route plan, including planned landings is then circulated to other vessels operating in the area, to avoid two vessels trying to land at the same site at the same time. It is based on the assumption that conditions will not be prohibitive to landing passengers.

C. Phase Two : adjustments in itineraries.

1. Adjustments often have to be made to daily itineraries. This is due to weather and ice conditions, other ships schedules, and opportunities which may become apparent during the voyage. If adjustments are made 24hrs+ in advance, notification is usually sent to other vessels to avoid conflict.

2. The criteria considered by an expedition leader when making the decision of whether to go to a site, assessing if the landing is feasible and if so, how it should be organised, fall into 3 categories:

- **Attraction of the site** : i.e. why choose to land at this site ? is there a more suitable alternative site within reasonable steaming distance? what activities are possible here ? *e.g.* the factors mentioned in B 3 i.e. renowned, natural history, continent landing, historical, scientific, *etc.*

- **Shore operation:** do the characteristics of the site require particular visitor control methods to be used to minimise potential disturbance of the environment and ensure safety ? if so what ? *e.g.* zodiac cruise only, guided walks, specific conduct reminders etc.

- **Marine operation**: Are the conditions good enough and stable enough to allow a landing ? if so how should the zodiac operations be organised *e.g.* consider :ship to shore distance; conditions at landing site and gangway; selection of best landing point; potential hazards; tide and current influences; number of shoremen required; number of zodiacs *etc.*

4. Based on these criteria the expedition leader is able to decide whether or not land at a particular site, conditions permitting. The expedition leader is also able to control the use of the site to ensure that: the landing is safe; it does not encroach areas into protected areas; and that the visit causes minimal disturbance to the local environment.

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