

ANTARCTIC TREATY MEETING OF EXPERTS¹

GUIDELINES FOR ANTARCTIC SHIPPING AND RELATED ACTIVITIES

17 – 19 APRIL 2000

London, UK

¹ The Meeting of Experts was held under Antarctic Treaty Recommendation IV-24 and in accordance with Antarctic Treaty Decision 2(1999). The Meeting was sponsored by the United Kingdom, Foreign and Commonwealth Office.

Executive Summary and list of Recommendations.

1. The Meeting of Experts was attended by 27 Antarctic Treaty Parties, 2 Antarctic Treaty Observer Organisations and 7 Invited Experts bodies. The Meeting made good progress in beginning to develop guidelines for Antarctic shipping and related activities. A number of key principles for the guidelines were considered, a Framework Document was developed as a possible basis for further elaboration of the guidelines and certain elements of the framework document were considered in greater detail.

2. The following recommendations were agreed by the Meeting, for Antarctic Treaty Parties to consider:

Recommendation 1. The guidelines for Antarctic shipping should be non-mandatory and developed in the style of a “handbook of information” for all vessels operating in Antarctic waters, South of 60° South.

Recommendation 2. The ATCM should note the situation regarding the development of the Arctic guidelines within the International Maritime Organisation and the need to maintain, where appropriate, consistency between the Arctic and Antarctic guidelines.

Recommendation 3. The guidelines for Antarctic shipping should be further developed using the attached Framework as a base document (Annex 4), but should concentrate only on those shipping related issues that are special to Antarctica.

Recommendation 4. The ATCM should not elaborate on construction and equipment issues in the Antarctic guidelines until the outcome of IACS Unified Requirements and IMO’s Arctic Guidelines are more clearly known.

Recommendation 5. The ATCM is invited to consider the Meeting of Expert’s working group summary reports, and the report of the drafting group on Environmental Protection, as a basis for further development of these issues.

Recommendation 6. The ATCM should continue to liaise with IMO on development of the Arctic and Antarctic shipping guidelines as appropriate.

Recommendation 7. The ATCM continues the development of the Antarctic shipping guidelines using the work undertaken by this Meeting of Experts as its basis.

Meeting Report

Introduction.

1. The Antarctic Treaty Meeting of Experts was held in London, UK, 17 – 19 April 2000. The Meeting was held under Antarctic Treaty Recommendation IV-24, pursuant to Decision 2(1999), (Annex 1) and paragraphs 99 to 108 of the Final Report of the XXIII Antarctic Treaty Consultative Meeting (ATCM; Peru, May 1999).
2. The Meeting was attended by representatives of the following Antarctic Treaty Parties:
Consultative Parties: Argentina, Australia, Brazil, Bulgaria, Chile, China, Ecuador, Finland, France, Germany, Italy, Japan, Republic of Korea, The Netherlands, New Zealand, Norway, Peru, Russia Federation, South Africa, Spain, Sweden, United Kingdom, Uruguay, United States of America; **Non-Consultative Parties:** Canada, Colombia, Romania.
3. In accordance with paragraph 6 of Decision 2(1999) the following were invited as observers: The Scientific Committee on Antarctic Research (SCAR) and the Council of Managers of National Antarctic Programmes (COMNAP).
4. In accordance with paragraph 7 of Decision 2(1999) the following were invited as expert bodies: Antarctic and Southern Ocean Coalition (ASOC), International Association of Antarctic Tour Operators (IAATO), International Association of Classification Societies (IACS), International Hydrographic Organisation (IHO), International Maritime Organization (IMO), International Association of Protection and Indemnity Clubs (P and I Clubs), World Meteorological Organisation (WMO).
5. A full list of participants is included at Annex 2.

Welcome and Opening Speeches

6. The Welcome Address and Opening Speech was given by Baroness Scotland of Asthal QC, Parliamentary Under Secretary of State for Foreign and Commonwealth Affairs and the UK Minister responsible for Antarctic Affairs.
7. In addition the delegates were also welcomed by Mr William O'Neil, Secretary-General to the International Maritime Organization.

Election of Officers

8. Mr Paul Sadler, from the UK Maritime and Coastguard Agency and the UK's Deputy Permanent Representative to the IMO, was elected Chairman. After thanking delegates for their support, Mr Sadler proposed Dr Neil Gilbert of the UK Foreign and Commonwealth Office, be appointed as Secretary to the Meeting.

9. Mr Sadler also proposed that a note of thanks and appreciation to Baroness Scotland and Mr O'Neil be recorded in the report of the Meeting.

Adoption of the agenda

10. Ahead of the Meeting, the UK had circulated a draft annotated agenda for consideration by participating delegations. No changes to the draft agenda were proposed. The Meeting therefore adopted the agenda as follows:

Agenda Item:

1. ELECTION OF OFFICERS
2. ADOPTION OF THE AGENDA
3. BACKGROUND TO IMO'S POLAR SHIPPING CODE
4. OBJECTIVES AND APPLICATION OF THE ANTARCTIC SHIPPING GUIDELINES
5. EXAMINATION OF THE MOST RECENT VERSION OF THE DRAFT ARCTIC GUIDELINES
6. CONSIDERATION OF OTHER ASPECTS OF THE DESIGN, CONSTRUCTION, MANNING AND EQUIPMENT OF VESSELS OPERATING IN ANTARCTIC WATERS, REQUIRING ELABORATION IN THE ANTARCTIC SHIPPING GUIDELINES.
7. DEVELOPMENT OF THE ANTARCTIC SHIPPING GUIDELINES.
8. LIAISON WITH IMO.
9. PROPOSALS AND REPORT FOR ATCM XXIV.

11. A number of papers were submitted by delegations for consideration during the meeting. A full list of papers and the agenda items under which they were considered is given in Annex 3.

Agenda Item 3. Background to IMO's Polar Shipping Code.

12. The Chairman presented summary paper (ATME/2000/002) which recorded the outcomes of the IMO's 71st Maritime Safety Committee meeting (MSC71; May 1999), and ATCM XXIII (May/June 1999), both of which had dealt with the issue of polar shipping guidelines and had subsequently led to the Meeting of Experts being established.

13. In presenting the paper, the Chairman reminded the Meeting that IMO had been, for sometime, considering the issue of a Polar Shipping Code. However, as a result of concerns raised by a number of IMO Member States, MSC71 had, amongst other issues, decided to:

- Further develop the "Code" as recommendatory guidelines only;
- Apply the guidelines only to SOLAS ships operating in the Arctic (i.e. cargo vessels of 500 GRT or over, vessels on international voyages only, passenger ships and special purpose ships);
- Apply the guidelines only to ice-covered waters north of 60° North;
- Exclude Antarctica from application of the guidelines, unless Antarctic Treaty members decide otherwise.

14. In response to the decision by IMO to develop only Arctic shipping guidelines, ATCM XXIII decided to:

- Give priority to the development of guidelines for Antarctic shipping and related activities;
- Seek subsequent adoption of the guidelines by IMO as a means of extending their applicability to IMO members that are not Antarctic Treaty Parties;
- Convene a Meeting of Experts to begin development of the Antarctic guidelines.

15. ATCM XXIII established the Meeting of Experts under Recommendation IV-24 and provided its Terms of Reference by means of Decision 2(1999), (Annex 1).

16. In considering the background to the issue, the Meeting agreed that, in further developing the Antarctic shipping guidelines, Antarctic Treaty Parties need not follow the revised mandate for the Arctic guidelines agreed by IMO at MSC71. Issues such as ships to which the guidelines should be relevant and geographical coverage could be considered afresh for Antarctica.

Agenda Item 4. Objectives and Application of the Antarctic Shipping Guidelines.

17. Under this agenda item, Romania introduced paper (ATME/2000/003), COMNAP introduced papers (ATME/2000/004 and ATME/2000/005), Germany introduced paper (ATME/2000/006) and IAATO introduced paper (ATME/2000/011). Against the background of these papers, the Meeting considered the following issues:

- The status of the Antarctic shipping guidelines;
- The primary audience for the guidelines;
- The vessels to which the guidelines should be targeted;
- The geographical area which the Antarctic shipping guidelines should cover.

18. The Meeting agreed that the guidelines should be non-mandatory and developed in the form of a “handbook of information”, and that the document should address both environmental and safety issues.

19. The Meeting considered that the primary audience for the guidelines should be Antarctic Treaty Parties (National Antarctic Programmes), and the tourism industry. However, the majority of delegations considered that the guidelines should be made available to all vessels operating in Antarctic waters.

20. However, the meeting noted that there may be difficulties associated with attempting to make the guidelines relevant to fishing vessels. Some delegations also raised the need for the guidelines to contain a sovereign immunity clause in line with that contained in Article 11 of Annex IV of the Environmental Protocol to the Antarctic Treaty. Other delegations, noting the recommendatory nature of the proposed guidelines, considered that such exclusions would not be necessary.

21. On the matter of geographical coverage, the majority of delegates expressed the view that the guidelines should cover only the area South of 60° South latitude given that the meeting had no mandate to extend its work beyond this area. However, a few delegations noted the advantages of considering a wider geographical area, e.g. up to and including the Antarctic Convergence.

22. The Meeting agreed the following recommendation:

Recommendation 1. The guidelines for Antarctic shipping should be non-mandatory and developed in the style of a “handbook of information” for all vessels operating in Antarctic waters, South of 60° South.

Agenda Item 5. Examination of the Most Recent Version of the draft Arctic Guidelines.

23. COMNAP introduced paper (ATME/2000/007) providing COMNAP's views on an earlier version of the IMO's Polar Shipping Code. The Secretariat of the International Maritime Organization (IMO) provided a verbal report of the outcome of the forty-third meeting of IMO's Design and Equipment Sub-Committee (DE43; 10-14 April 2000). The Meeting was informed that a working group had been established during DE43 to consider further development of the Arctic guidelines. However, the IMO Sub-Committee had not yet properly considered the outcome of the working group's deliberations and therefore agreed that it was inappropriate at this time to forward the latest version of the Arctic guidelines to the Meeting of Experts.

24. Recognising that the draft Arctic guidelines being considered by IMO were still under development, the majority of delegations agreed that it was inappropriate, at this time, to use the Arctic guidelines as the primary basis for the development of the Antarctic guidelines. However, some delegations felt that, where appropriate, the Arctic guidelines would be a useful basis from which to develop the Antarctic document. It was also noted that an appropriate degree of consistency between the two guidelines would be desirable recognising that some vessels may wish to operate in both the Arctic and Antarctica.

25. The Meeting agreed the following recommendation:

Recommendation 2. The ATCM should note the situation regarding the development of the Arctic guidelines within the International Maritime Organisation and the need to maintain, where appropriate, consistency between the Arctic and Antarctic guidelines.

Agenda Item 6. Consideration of Other Aspects of the Design, Construction Manning and Equipment of Vessels Operating in Antarctic Waters, Requiring Elaboration in the Antarctic Shipping Guidelines.

26. Under this Agenda Item the US introduced paper (ATME/2000/009) setting out draft Antarctic shipping guidelines; the UK introduced paper (ATME/2000/010) on environmental protection issues; the Russian Federation introduced papers (ATME/2000/013) on shipping safety issues, (ATME/2000/014) on regioning of the Southern Ocean, (ATME/2000/015) on crew training and (ATME/2000/016) on navigation safety, and WMO introduced paper (ATME/2000/017) on Antarctic meteorological services.

27. Against the background of these papers, the Meeting considered a broad range of issues that might require elaboration in the Antarctic shipping guidelines and developed a list of high level principles as a "Framework Document" to assist further development of the guidelines (Annex 4).

28. The issue of dividing Antarctic waters into a series of "zones" based on ice and meteorological conditions was raised in paper (ATME/2000/006) from Germany and paper (ATME/2000/014) from the Russian Federation. Several delegations expressed concern at such an approach, noting that attempting to apply restrictions on access to such zones was inconsistent with the non-mandatory nature of the shipping guidelines. A few delegations suggested that, provided such zones were not linked to operational or construction restrictions, there may be merit in using zones as a means of providing regional and local information on environmental conditions for ships operating in specific areas of the Southern Ocean. One delegation also pointed out that such zones would also need to account for issues such as seasonal variability (in, for example, sea-ice), remoteness and frequency of vessel traffic.

29. The meeting also recognised that issues addressed in the guidelines should largely contain recommendations and advice, which were additional to provisions contained in existing international instruments. However, the meeting noted that the application of the guidelines, as considered under Agenda Item 4, extends beyond existing provisions and that the guidelines should be drafted with this in mind.

30. The Meeting agreed the following recommendation:

Recommendation 3. The guidelines for Antarctic shipping should be further developed using the attached Framework as a base document (Annex 4), but should concentrate only on those shipping related issues that are special to Antarctica.

Agenda Item 7. Development of the Antarctic Shipping Guidelines.

31. Under this agenda item SCAR introduced paper (ATME/2000/012) providing a statement of its views on the proposed shipping guidelines. The meeting then used the Framework document developed under Agenda Item 6 as the basis for discussions under Agenda Item 7. However, recognising the decisions taken under Agenda Item 4, the meeting agreed that it was inappropriate, at this time, to further develop Sections IV and V (Construction and Equipment issues) until:

- a) IACS had completed their work on the Unified Requirements for Polar Class vessels, and
- b) a more complete version of the Arctic guidelines being developed by the IMO, was available to Antarctic Treaty Parties.

32. The meeting identified key issues that it felt able to develop further and established three working groups to elaborate on the following issues:

Working Group 1: Section II of the Framework Document – “General Principles”

Working Group 2: Section VI of the Framework Document; Navigational Infrastructure, Obtaining and Using Meteorological and Sea-ice Information, and Crewing / Training.

Working Group 3: Section VI of the Framework Document; Incident Reporting, Investigation and Analysis, Ship-based Air Operations and SAR Issues.

33. The working groups were provided with the following Terms of Reference:

1. To identify, under each subject heading, the particular hazards in Antarctica that would require additional guidance to vessel operators;
2. To develop a list of recommendations to vessel operators that the Group considers address those hazards (not applicable to Working Group 1, as the meeting agreed that at this time it was not appropriate to link operational and construction requirements to such information).

34. The outcomes of each Working Group were reported to, and discussed in Plenary and are attached at Annex 5. The Meeting agreed that the reports would form a useful basis for further development of these specific issues.

35. Additionally, a small drafting group was established to further develop Section VI, Environmental Protection, using paper (ATME/2000/010) as a base document. The Meeting noted the revised document, but had insufficient time to discuss the matter further. The Meeting agreed however, to refer the document to ATCM for consideration (Annex 6).

36. The Meeting agreed the following recommendations:

Recommendation 4. The ATCM should not elaborate on construction and equipment issues in the Antarctic guidelines until the outcome of IACS Unified Requirements and IMO's Arctic Guidelines are more clearly known.

Recommendation 5. The ATCM is invited to consider the Meeting of Expert's working group summary reports, and the report of the drafting group on Environmental Protection, as a basis for further development of these issues.

Agenda Item 8. Liaison with IMO.

37. The Meeting considered the need for further liaison with IMO and agreed to recommend to ATCM that they maintain this important link. In this regard it was noted that the meeting agreed to defer, at this time, the further development of Sections IV and V of the Framework Document so as to ensure, where appropriate, a degree of consistency with the Arctic guidelines on these issues.

38. The Meeting agreed the following recommendation:

Recommendation 6. The ATCM should continue to liaise with IMO on development of the Arctic and Antarctic shipping guidelines as appropriate.

Agenda Item 9. Proposals and Report for ATCM XXIV.

39. A draft Chairman's summary including 7 draft recommendations to the ATCM were considered by the Meeting. The final report of the Meeting of Experts was prepared on the basis of the Chairman's summary. In concluding its business, the Meeting agreed that good progress had been made during the three-day Meeting of Experts in beginning to develop the guidelines for Antarctic shipping.

40. The Meeting agreed the following recommendation:

Recommendation 7. The ATCM continues the development of the Antarctic shipping guidelines using the work undertaken by this Meeting of Experts as its basis.

ANNEX 1.

DECISION 2(1999) ATCM XXIII: GUIDELINES FOR ANTARCTIC SHIPPING AND RELATED ACTIVITIES

The Representatives,

Recalling Resolution 3(1998) on the draft Polar Shipping Code;

Noting the outcome of the 71st session of the International Maritime Organisation's Maritime Safety Committee regarding the development of a Polar Shipping Code in the form of non-mandatory guidelines, and the intention to exclude Antarctica from the application of these guidelines unless Antarctic Treaty Consultative Parties decide otherwise;

Recalling the provisions of Article 10 of Annex IV of the Protocol on Environmental Protection to the Antarctic Treaty;

Recognising the importance of maximising the safety of vessels operating in Antarctic waters;

Decide:

1. To give priority to the development of guidelines for Antarctic shipping and related activities pursuant to Article 10 of Annex IV to the Protocol;
2. To seek subsequent adoption of these guidelines by the International Maritime Organisation (IMO) as a means of extending their applicability to members of the IMO that are not Antarctic Treaty Consultative Parties;
3. To convene a Meeting of Experts under the provisions of Recommendation IV-24, with the aim of developing draft guidelines for Antarctic shipping and related activities;
4. To notify the IMO, through Peru as host Government of ATCM XXIII, of the provisions of paragraphs 1, 2 and 3 above;
5. Pursuant to paragraph 3 above, to request the Meeting of Experts:
 - i. to examine the most recent version of the draft Polar Shipping guidelines being developed for the Arctic by the IMO, and decide which elements of those draft Arctic guidelines should form the basis of the Antarctic guidelines;
 - ii. to consider other aspects of the design, construction, manning and equipment of vessels operating in Antarctic waters that might require elaboration in the Antarctic guidelines;
 - iii. to take into account existing international instruments regulating shipping activities in Antarctica, including for example MARPOL, SOLAS, UNCLOS and the Environmental Protocol to the Antarctic Treaty;
 - iv. to take into account existing guidelines adopted under the Antarctic Treaty, and in particular those adopted under Resolution 6 (1998);
 - v. to ensure the guidelines adequately take account of the nature of Antarctic shipping, the environmental conditions of Antarctica and the system of international governance applying to the Antarctic Treaty area;
 - vi. to report back to ATCM XXIV.

6. To encourage attendance at the Meeting by representatives from Consultative Parties, particularly their Antarctic and marine safety experts, and to invite experts from, Non-Consultative Parties, the Council of Managers of National Antarctic Programmes (COMNAP) and the Scientific Committee on Antarctic Research (SCAR).
7. To also invite experts from the following bodies: International Hydrographic Organisation (IHO), International Maritime Organisation (IMO), World Meteorological Organisation (WMO), International Association of Classification Societies (IACS), International Association of Protection and Indemnity Clubs (P&I Clubs), International Association of Antarctic Tour Operators (IAATO) and the Antarctic and Southern Ocean Coalition (ASOC).
8. To accept the offer of the United Kingdom Government to host the Meeting of Experts in London, which should, as far as possible, be held in conjunction with a meeting of the appropriate IMO expert body.
9. That in accordance with Recommendation IV-24, the United Kingdom should submit a report of the Meeting of Experts to ATCM XXIV for consideration.

ANNEX 2

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* Note: Ecuador also attended the Meeting of Experts, but no contact details were provided to the meeting secretariat

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ANNEX 3

List of submitted documents and agenda item allocation.

Paper Number	Title	Submitted by	Agenda Item
ATME/2000/001	Agenda		2
ATME/2000/002	Outcome of the IMO's MSC71 and ATCM XXIII	Chair	3
ATME/2000/003	Guidelines for the Antarctic Maritime Transport in Connection with the Environmental Protection (Opening Address)	Romania	4 and 7
ATME/2000/004	An Assessment of Environmental Emergencies Arising from Activities in Antarctica	COMNAP	4 and 6
ATME/2000/005	Information Paper on Antarctic Shipping	COMNAP	4
ATME/2000/006	Specific Requirements for Safe and Environmentally Sound Maritime Traffic in Antarctic Waters	Germany / GAUSS	4 and 6
ATME/2000/007	Working Paper on the Polar Code	COMNAP	5 and 6
ATME/2000/008	Training Requirements for Ships Officers and on Navigation / Communication Equipment for Antarctic Vessels	COMNAP	6
ATME/2000/009	Draft Antarctic Shipping Guidelines	US	6 and 7
ATME/2000/010	Environmental Protection Issues	UK	6 and 7
ATME/2000/011	Information Paper on Tourism Vessels in Antarctica	IAATO	4
ATME/2000/012	A Statement by SCAR	SCAR	7
ATME/2000/013	Approaches for Providing Safety of Ice Shipping in Antarctica	Russian Federation	6
ATME/2000/014	Regioning of the Southern Ocean Depending on Ice Navigation Conditions	Russian Federation	6
ATME/2000/015	Training and Selecting Ship Crews Participating in the Activities of the Russian Antarctic Expedition	Russian Federation	6
ATME/2000/016	Measures Aimed at maintaining a High Level of Navigation Safety On-board the Russian Antarctic Expedition Ships	Russian Federation	6
ATME/2000/017	Data-processing activities and Meteorological Services in the Antarctic	WMO	6

ANNEX 4

[HANDBOOK OF INFORMATION] / [GUIDELINES] FOR ANTARCTIC SHIPPING

I – APPLICATION AND DEFINITIONS

In the context of being recommendatory (non-mandatory) guidelines, application will be encouraged for all ship types and sizes (including military, government, [fishing vessels], pleasure vessels). However, ATCM may have to consider whether to include fishing vessels and the issue of sovereign immunity.

They will be a single set of flexible guidelines which will apply to vessels operating in Antarctic waters (majority support South of 60° South).

Both environmental and safety issues to be considered. The Environmental Protocol may provide a substantive basis for environmental issues.

Definitions to include harmonisation of ice classes.

II - GENERAL

Including identification of local and regional hazards particular to the Antarctic (including provision of information regarding seasonality of meteorological and sea ice conditions, remoteness, vessel traffic density)

III - SUMMARY OF INTERNATIONAL INSTRUMENTS RELEVANT TO ANTARCTIC SHIPPING - IMO AND ANTARCTIC TREATY REQUIREMENTS

Note: It is intended that the following Sections IV, V, VI should be non-prescriptive and only contain recommendations additional to those identified in Section III above.

IV - CONSTRUCTION

SUBDIVISION AND STABILITY – including positioning of tanks containing pollutants; ice accretion

HULL, MACHINERY AND ELECTRICAL ARRANGEMENTS – including recommendations on types of fuels on board and winterisation of ship machinery, equipment and service systems

ACCOMMODATION, MEANS OF ESCAPE AND FIRE SAFETY MEASURES

V - EQUIPMENT

LIFE SAVING ARRANGEMENTS AND SURVIVAL EQUIPMENT - including medical provisions

NAVIGATIONAL EQUIPMENT

COMMUNICATIONS EQUIPMENT

VI - OPERATIONAL

NAVIGATIONAL INFRASTRUCTURE

OBTAINING AND USING METEOROLOGICAL AND SEA ICE INFORMATION

CREWING AND TRAINING - including "Ice Navigators"; additional specialist jobs (diving, hydrography, repairs, medical)

ENVIRONMENTAL PROTECTION – including Emergency Planning (noting COMNAP Guidelines for Oil Spill Contingency Planning, and COMNAP Guidelines for fuel oil handling - Resolution 6 (1998)); Environmental Impact Assessments; waste management issues (garbage, oily wastes, food, sewage); marine protected areas

INCIDENT REPORTING AND INVESTIGATION – including COMNAP Guidelines for Spill Reporting (Resolution 6 (1998));

PLANNED MAINTENANCE PROGRAMS

SHIP BASED AIR OPERATIONS – Antarctic Flight Information Manual

SAR ISSUES – including contingency planning

BIBLIOGRAPHY

ANNEX 5

Report of Working Group 1

General Principles

Special issues for consideration in Antarctica

Ships operating in Antarctic waters are exposed to a number of particular conditions and risks. Poor weather conditions and the relative lack of comprehensive and up-to-date charts, communication systems, and other navigational aids pose challenges for inexperienced Antarctic mariners. The remoteness of the areas makes rescue or clean-up operations difficult and costly. Extreme low temperatures may reduce the effectiveness of numerous components of the ship.

Factors to be considered alone or in combination when operating in the Antarctic Treaty Area (the area south of 60 degrees S.) include, but are not limited to:

NAVIGATION

- Available information and accuracy of navigational charts and other publications
- Availability and accuracy of “real time” ice information
- Availability of reliable weather forecasting services
- Concentration and local visibility of ice (sea ice, inclusion of shelf ice, glacier ice, etc)
- Characteristics of ice (multi year ice, first year ice, second year ice, etc)
- Unexpected movements of glacier ice (calving, capsizing,)
- Awareness of sporadic ice in open water
- Wind changes, including local variations
- Visibility, heavy snow, ‘white-outs’
- Currents
- Risk of low temperatures causing icing of the ship

ENVIRONMENTAL

- Heightened awareness of all Antarctic wildlife
- Low temperatures mean slower dissipation of persistent fuel spills than in warmer climates (note differences between fuel types)]
- Storage of potential pollutants (i.e. heavy fuels, chemicals, sewage, garbage, etc.) in high risk locations
- Release of pollutants as a result of damage to un-protected tanks
- Special Area status under MARPOL South of 60S; some areas additionally protected under Antarctic Treaty;
- Protocol on Environment Protection to the Antarctic Treaty applies South of 60S (for Parties to the Protocol)
- Lack of oil spill response centres in Antarctica
- Handling and storage of waste and arrangements for shore side disposal
- Precautions required to prevent introduction and spread of diseases, plants, animals, insects etc.

OPERATIONAL

- Demand for heightened awareness by Master and / or officer of the watch, of ship operating characteristics (i.e. manoeuvrability)
- Remoteness from rest of the world; distance between stations; lack of repair facilities; limited SAR facilities
- Lack of escort vessels
- Vessel traffic density (high or low)
- Generally informal ship reporting arrangements
- Ice or grounding damage to tanks, steering gear and propellers
- Large passenger-vessel (limited search and rescue capability involving large numbers of people: lack of shore and vessel support)
- Operating helicopters,
- Operating adjacent to ice shelves, ledges, bergs, floes,
- Cold/wet/windy – hazard for crew and pax in open boats, ashore
- Cold water survival
- Lack of reliable communication
- Besetment in ice

GEOGRAPHIC VARIABILITY

Factors to consider are:

- Region
- Operating season (certain areas have a longer operating season with ice free waters)
- Present conditions
- Specifications of Vessel
- Local knowledge -nothing replaces the experience of the Master

Report of Working Group 2.

Navigational Infrastructure; Obtaining and Using Meteorological and Sea-ice Information; Crewing and Training

Navigational Infrastructure

Navigation in the Antarctic can be hazardous, in part because of inadequate navigation infrastructure. Navigation charts are often based on sparse, relatively old and inaccurate data, and may not be, by SOLAS standards, "appropriate for the voyage at hand". Navigation aids, such as DGPS, beacons and buoys, are rarely available. Radio navigation warnings of new hazards may not always be available in a timely manner.

(The national hydrographic offices of states active in Antarctic operations have embarked upon a programme to improve the charts in the area. They have prepared a comprehensive chart scheme, and are conducting survey campaigns to obtain the necessary data. It is their intention to produce good quality charts of a scale appropriate to operations (large scale for base approaches, medium scale for coastal voyages); Further detail may be obtained from the IHO and the national hydrographic offices.)

In these circumstances ship masters must use all available navigation equipment (see also guidelines on equipment), in conjunction with the best available charts. These may include charts and books from a number of different hydrographic offices.

Before embarking on voyages to the Antarctic, ships masters should ensure that they hold the latest information available. If necessary they may contact directly their national hydrographic offices, and maritime safety agencies. Most of these agencies operate web sites and publish chart catalogues. The IHO publishes a useful reference entitled 'SP-59; Status of hydrographic surveying and nautical charting in Antarctica', and operates a web site www.iho.shom.fr Masters should also obtain the latest advisory notices published by national maritime safety authorities.

(Because of the undeveloped nature of the navigation infrastructure in Antarctica, masters should always proceed with the greatest caution.)

Obtaining and Using Meteorological and Sea-Ice Information.

The purpose of obtaining and using meteorological and sea-ice information should be developed in the guidelines.

The following sources of meteorological and sea-ice data exist:

- Network of staffed and AWS land-based stations, polar-orbiting satellites, drifting buoys, voluntary observing ships.

In support of shipping in the Antarctic the following products should be provided:

- Surface analysis and weather forecasts, upper-air analyses and forecasts, sea state analyses and forecasts; sea-ice analyses with prognoses.

Centres responsible for meteorological and sea-ice services should be set up in Antarctica, or outside Antarctica, by WMO subject to the agreement of the countries concerned. Website of the US National Ice Centre (www.natice.noaa.gov) should be used to obtain weekly ice charts for the Antarctic.

Responsible centres should prepare meteorological analyses and prognoses, and specialised meteorological forecasts, and make these available for users. They also should prepare and distribute warnings of dangerous weather and sea-ice conditions, including icing conditions.

Masters should also have at their disposal the latest manuals about ice navigation.

Crewing and Training

The guidelines should take some text from paper ATME/2000/008 from COMNAP relating to training.

They should also refer to the guidelines for training in ice navigation being addressed within the IMO, and their development of a relevant IMO model course. Such training should also include techniques in cold weather survival.

The importance of 'on-the-job' training should be emphasised.

Experience is a most important component of expertise in ice navigation. Masters and first mates should have extensive experience. Masters with limited Antarctic experience should sail with an experienced ice navigator. (These words may be revised when the IMO model course is available).

Report of Working Group 3

DEVELOPMENT OF GUIDELINES ON SAR ISSUES, SHIP BASED AIR OPERATIONS AND INCIDENT REPORTING, INVESTIGATION AND ANALYSIS

HAZARDS/PROBLEMS/ISSUES

MEASURES TO ADDRESS THESE

<u>SAR Issues</u>	Communication/Co-ordination is the key
Remote area Isolated	Voluntary ship reporting <ul style="list-style-type: none"> • existing systems (e.g. Chile, Argentina, South Africa, Australia) • note COMNAP initiative for wider ranging proposals
Low density of shipping	Advanced exchange of information <ul style="list-style-type: none"> • existing National operators' system • existing IAATO system
Survival until rescue	<p>Database of call signs / contact details / IMO number / HF & VHF frequencies (plus other appropriate information)</p> <ul style="list-style-type: none"> • information currently collected by COMNAP and IAATO. Could broaden this to include all ships and make it available more widely, e.g. to agencies with a SAR responsibility under SAR Convention <p><i>NB: IMO News No. 1 (1999) – provides details of SAR zones including Antarctica.</i></p> <p>Recommend self-sufficiency wherever possible.</p> <p>Identify existing systems in place - SAR convention.</p> <ul style="list-style-type: none"> - GMDSS - IAATO medivac plan <p>Provide guidelines on the preparation of contingency plans.</p>
Weather / Ice / Temperature Icebergs Glaciers (calving)	<p>Being covered by all 3 working groups.</p> <p>Guidelines / Handbook should identify what information is available, where and when.</p>
Limited chart data / coverage	Being covered by working group 2.
Vessels with large* numbers of persons on board	This issue was discussed by the group. However, it was noted that it is due for consideration by IMO's MSC meeting in May.
*Not defined	

Ship based air operations

Note air operations in Antarctica already covered by the ATS approved AFIM requirements:

- AFIM: Antarctic Flight Information Manual
- TIBA: Traffic Information Broadcast by Aircraft
- Antarctic Flight Plan

Ensure operators have approved civil (or military equivalent) operations manuals from their appropriate national authorities (shipboard elements as well as air). Such operation manuals should be consistent with the Environmental Protocol to the Antarctic Treaty and AFIM. Include information on where / how to obtain an AFIM.

Incident reporting, investigation and analysis

Fuel oil spills: Guidelines should refer to existing systems under MARPOL and COMNAP.

Data collection difficult

Other incidents: Highlight existing reporting systems, i.e. relevant regulatory authorities, IMO, flag states.

ANNEX 6

Report of the Drafting Group

Environmental protection issues - Revision 2

1. Introduction

Antarctica is the largest wilderness on Earth. Special precautions to prevent marine pollution are required to be taken by vessels when operating in Antarctic waters south of 60 degrees S. Oil spills, chemical pollution and garbage originating from vessels can harm, injure or kill Antarctic wildlife.

2. Legislation

MARPOL 73/78

The international agreement which controls pollution from ships operating on the high seas is the International Convention for the Prevention of Pollution from Ships, 1973, and its 1978 Protocol. This agreement is more commonly known as MARPOL 73/78. It includes a set of six Annexes, which are:

Annex I - Regulations for the Prevention of Pollution by Oil

Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk

Annex III - Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form

Annex IV - Regulations for the Prevention of Pollution by Sewage from Ships

Annex V - Regulations for the Prevention of Pollution by Garbage from Ships

Annex VI - Regulations for the Prevention of Air Pollution from Ships.

Currently, Annexes I, II, III and V are in force, but Annexes IV and VI are not.

Antarctic Special Area

The sea area south of 60 degrees S latitude (the Antarctic Treaty Area) has been designated by the International Maritime Organisation (IMO) as a Special Area under Annexes I, II and V of MARPOL 73/78. This designation prohibits the discharge into the sea of oil and oily waste (except in cases permitted by Annex I of MARPOL 73/78), noxious liquid substances carried in bulk, all plastics and all other garbage. The provisions require that oil and oily wastes, all plastics and all other garbage should be discharged at port reception facilities outside of the Antarctic Treaty Area. The Special Area provisions came into force for Annexes I and V on 17 March 1992, and for Annex II on 1 July 1994.

Protocol on Environmental Protection to the Antarctic Treaty

On 14 January 1998 the Protocol on Environmental Protection to the Antarctic Treaty entered into force. The Protocol designates Antarctica as a natural reserve devoted to peace and science, introduces a set of environmental principles, and establishes regulations to provide comprehensive

protection for the Antarctic environment and related and dependent ecosystems. Annex IV of the Protocol (Prevention of Marine Pollution) contains rules to control marine pollution from ships operating in the Antarctic Treaty Area and follows closely the MARPOL 73/78 provisions.

3. Environmental protection guidelines

Vessels operating in Antarctic waters should ensure that they follow the environmental protection guidelines set out below, to ensure that impacts on the Antarctic marine environment are minimised. The guidelines are intended as a summary of current legislation and best practice. They have no legal status. Vessels, therefore, as well as carrying these guidelines should also carry copies of the current international requirements which protect the Antarctic marine environment (e.g. Environmental Protocol).

Environmental Impact Assessment

All proposed activities, including vessel operations in the Antarctic Treaty Area, for which advance notification in accordance with Article VII (5) of the Antarctic Treaty is required, are required to undergo an assessment of their environment impact before they are allowed to proceed. Article 8 and Annex I of the Environmental Protocol set out the requirements for Environmental Impact Assessment for proposed activities in Antarctica.

Emergency Planning

Article 12 of Annex IV of the Environmental Protocol requires the Antarctic Treaty Consultative Parties to develop contingency plans for marine pollution response south of 60 degrees S, including contingency plans for ships. This is to provide for prompt and effective response action in the event of a marine pollution emergency. Guidelines for Oil Spill Contingency Planning have been developed by the Council of Managers of National Antarctic Programmes (COMNAP) to assist in the preparation of contingency plans. The Antarctic Treaty Consultative Parties adopted these guidelines at the XXII Antarctic Treaty Consultative Meeting as Resolution 6 (1998).

Regulation 26 of Annex I of MARPOL 73/78 requires ships to carry a shipboard oil pollution emergency plan. This requires every oil tanker of 150 gross registered tonnage (grt) and above, or a vessel, other than an oil tanker, of 400 grt and above, to carry a shipboard oil pollution emergency plan approved by its Flag State administration. All vessels operating in the Antarctic Treaty Area should have the capability to contain and clean-up on board spills.

Hazardous chemicals

The disposal by vessels of hazardous or polluting chemicals or substances (e.g. battery acid, antifreeze) into the sea in the Antarctic Treaty Area in quantities or concentrations that are harmful to the marine environment is prohibited. Such substances should be kept securely on board for disposal at port reception facilities outside of the area.

Oil and oily mixtures

Oil and oily mixtures, sludge, dirty ballast and tank washing waters must be kept on board vessels for disposal at port reception facilities outside of the Antarctic Treaty Area. Arrangements to dispose of such wastes must be concluded before entering the area. Vessels must be fitted with tanks of sufficient capacity to retain on board all such oily residues during Antarctic operations.

The discharge of any oil or oily mixture into waters south of 60 degrees S is prohibited, except as permitted under Annex I of MARPOL 73/78 (Regulation 11). An oil record book is to be kept on board, as required by Annex I of MARPOL 73/78. This is to be completed each time oil or oily mixtures are discharged, or in the event of an oil spill.

Waste management

Litter and garbage

All garbage including plastics, paper products, rags, glass, metal, bottles, crockery, incineration ash, dunnage, lining and packing materials must be kept on board for disposal at port reception facilities outside the Antarctic Treaty Area. Arrangements to dispose of such wastes must be concluded before entering the area. Vessels must have sufficient capacity on board for the retention of all garbage during Antarctic operations. Garbage should be compacted or shredded and stowed carefully. When garbage is mixed with other substances having different disposal requirements, the most stringent disposal requirements apply.

Placards are to be displayed on board the vessel showing disposal requirements when sailing in and out of the Antarctic Special Area. Placards must be written in the working language of the crew.

The onboard incineration of ship generated waste in the Antarctic Treaty Area is permitted. Shipboard waste incinerators should be designed, constructed, operated and maintained in accordance with IMO standards. Except in an emergency, no open burning of waste should be carried out.

Annex V of MARPOL 73/78 also requires every ship of 400 grt or above to carry a garbage management plan and a garbage record book. The management plan sets out written procedures for collecting, storing, processing and disposing of garbage. The record book is to be completed each time garbage is discharged or incinerated, or in the event of any accidental loss of garbage.

Food wastes

The disposal of food waste into the sea is permitted in the Antarctic Treaty Area if it has been passed through a comminuter and is discharged not less than 12 nautical miles from the shore. All comminuted food waste must be capable of passing through a screen with a mesh size of less than 25 mm. Food waste that is difficult to comminute should be either [burnt in a shipboard incinerator] or frozen and disposed of at port reception facilities outside of the area.

Sewage

The discharge of untreated sewage within 12 nautical miles of the shore is prohibited, except where it would unduly impair Antarctic operations. No sewage should be discharged in the vicinity of research stations as this might affect scientific investigations. Beyond 12 nautical miles of the shore, sewage stored in holding tank must be discharged at a moderate rate, preferably when the vessel is proceeding en route at a minimum speed of 4 knots. Where practicable, sewage should be passed through an onboard sewage treatment plant, which should meet the standards and tests agreed by IMO, and be inspected regularly.

Vessels and small craft certified to carry not more than 10 people can discharge untreated sewage within 12 miles of the shore. However, such vessels should discharge sewage in deep water, as far as possible from the coast, to aid rapid dispersal.

Protected areas

A number of sites in the Antarctic Treaty Area have been given special protection because of their outstanding environmental, scientific, historic or other values. Some of these sites comprise marine areas. Entry into some protected areas is prohibited without a permit issued by an appropriate national authority designated by an Antarctic Treaty Consultative Party. A permit will contain conditions as set out in the approved management plan for that particular area. This will determine what a vessel, and its crew and passengers, may or may not do while in that area. For example, vessels may be asked, where possible, to avoid anchoring within a site, or to refrain from discharging sewage.