INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT
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DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING IN POLAR WATERS

Report of the correspondence group

Submitted by Norway

SUMMARY	
Executive summary:	This document contains the report of the correspondence group on development of a mandatory Code for ships operating in polar waters
Strategic direction:	5.2
High-level action:	5.2.1
Planned output:	5.2.1.19
Action to be taken:	Paragraph 16
Related documents:	DE 53/26, section 18; DE 53/18/1, DE 53/18/2, DE 53/18/3, DE 53/18/5, DE 53/18/6, DE 53/18/7, DE 53/18/8 and DE 53/18/9

Background

1 Following the decision by MSC 86 to include in the work programme of the Sub-Committee and in the provisional agenda for DE 53 a high-priority item on "Development of a mandatory Code for ships operating in polar waters", with a target completion date of 2012, the Sub-Committee, at its fifty-third session, agreed to establish a correspondence group under the co-ordination of Norway to further develop the draft International Code of safety for ships operating in polar waters.

Terms of reference

2 The correspondence group was given the following terms of reference:

.1 to further develop the draft International Code of safety for ships operating in polar waters (Polar Code) on the basis of the comments, proposals and decisions made at DE 53 regarding the basic principles of the Code, taking into account documents DE 53/18/1, DE 53/18/2, DE 53/18/3, DE 53/18/5, DE 53/18/6, DE 53/18/7, DE 53/18/8 and DE 53/18/9; and

.2 to submit a report to DE 54.

Members

3 Norway would like to thank the following administrations and organizations for their active contribution to the work of the group: Argentina, Australia, the Bahamas, Canada, Chile, China, Denmark, Finland, France, Germany, Iceland, Japan, the Netherlands, New Zealand, Republic of Korea, Russian Federation, Sweden, the United Kingdom, the United States, Vanuatu, EC, BIMCO, CESA, CLIA, CSC, FOEI, IACS, IADC, ICS, IFAW, INMARSAT, Interferry, INTERTANKO, ISO, OCIMF, Pacific Environment, RINA and WWF.

A public website has been created to assist the work of the group: www.sdir.no/polar-waters.

Discussion

4 Bearing in mind that the Polar Code should address necessary requirements consistent with the Law of the Sea and the Antarctic treaty, in addition to those of other relevant binding IMO instruments, the group agreed to approach the work in two steps:

.1 Step 1: Passenger and cargo ships covered by SOLAS; and

.2 Step 2: Non-SOLAS ships including fishing vessels and pleasure craft.

In considering step one it should be borne in mind that SOLAS does not have a single application (e.g., fishing vessels are included in chapter V) and other IMO instruments with a different application are already in force in Polar waters (e.g., MARPOL). One member has voiced concerns regarding this approach.

5 During the development of the Code, it is recommended that input should be encouraged from the Antarctic Treaty Parties and other bodies having an interest in ship operations in the polar regions, through submissions and representation by Member States.

6 The group discussed a proposal to establish operational limitations based on geographical boundaries. It was pointed out that, in determining operational limitations, multiple considerations are needed. Hence it was agreed to defer the discussion until more detailed regulations are developed, in order to have a better picture of the various limitations.

7 Based on the decisions made at DE 53, the group prepared a draft structure of the Code as basis for its further work. The draft Code is set out in the annex. It should be noted that the whole content of the annex is subject to further consideration, including the list of contents. One member expressed disagreement with the proposed structure and proposed to use the ISM Code as a basis for regulating operations in polar areas.

8 The draft Code also lists various proposals for additional hazards to be considered. The list may not be exhaustive, has not been discussed in depth and needs further consideration. A possible grouping of these hazards and how to present them in the Code is still under consideration.

9 During the discussions, the question of addressing the societal differences between the Arctic and the Antarctic regions and how to address possible risks posed by Arctic shipping to vulnerable indigenous and other local communities in the Arctic was raised. Some members were of the opinion that this is outside of the remit of IMO. As this is a matter of policy, the Sub-Committee's advice is sought on this issue.

10 The group very briefly discussed how to assess the various hazards identified. In that context it was proposed that possible methods of work for the risk analysis and the determination of risk control options should be discussed further.

11 Some members of the group are of the opinion that as a minimum assessment of a specific proposed additional measure, the existing regulations, systems or equipment should be considered to determine their efficiency in polar operation prior to adding new requirements. Any operational or other limitations to current or amended measures should be determined. Additional assessments may be needed to justify other specific proposal and the IMO FSA Guidelines were recommended by some of the members.

12 Concerns have been raised by some members that the Code may end up as a self-regulating "dynamic risk assessment" approach and that decisions made as to the suitability of a vessel to undertake a voyage in polar waters are governed by pre-determined regulations. It is anticipated that further in-depth discussion on the content of the Code will clarify this issue.

13 The group acknowledges that assistance from other sub-committees and the MEPC will be needed. However, it is recommended that a first draft is developed by the DE Sub-Committee prior to seeking advice from the relevant IMO bodies.

14 The importance of proper training has been underlined several times by the group and it is acknowledged that the STCW Convention and Code is the proper place for such training requirements. However, it should also be considered to include some measures related to manning and training specific to polar operations in the Code.

15 The group recommends that a working group is established at DE 54 to further develop the Code.

Action requested of the Sub-Committee

16 The Sub-Committee is invited to:

.1 note the progress made in the development of the Code;

.2 endorse the recommendation in paragraph 5;

.3 advise the group as requested in paragraph 9;

.4 endorse the recommendation in paragraph 13; and

.5 agree to establish a working group at this session.

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ANNEX

DRAFT

INTERNATIONAL CODE OF SAFETY FOR SHIPS OPERATING IN POLAR WATERS

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.9 ...

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7 Mandatory provisions under the Search and Rescue Convention/additional requirements to SAR Convention

8 Other mandatory provisions

.1 Mandatory provisions under the Oil Pollution, Preparedness, Response and Cooperation Convention (OPRC Convention) and Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances (OPRC-HNS Protocol)

9 Crew competence/crewing

10 Provisions to reduce fatigue/crew endurance (polar nights, noise/vibration when operating in ice, etc.)

11 Manuals

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13 Demonstration of compliance

Part B – Recommendations

List from Part A as appropriate

Preamble

1 The International Code of Safety for Ships Operating in Polar Waters has been developed to increase the safety of ships' operation in these harsh, remote and vulnerable areas.

2 This Code has been developed to be consistent with the United Nations Convention on the Law of the Sea, 1982 "UNCLOS" and the Antarctic Treaty or other international instruments applicable to polar waters. (Nothing in its contents should be read as conflicting with those treaties.)

3 The Code has been developed as a supplement to relevant conventions and codes for ships operating in polar waters in order to assess and address risks that are specific to operations in polar waters such as the environmental conditions and the remoteness of the operation. Furthermore, the Code aims at addressing and assessing the possible impact of shipping operations on the environment and any other factors that are of particular significance in polar regions.

4 The Code acknowledges that the polar environment imposes additional demands on ships, their systems and operation beyond the existing requirements of the International Convention for the Safety of Life at Sea (SOLAS), 1974, the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol relating thereto (MARPOL 73/78) and other relevant binding IMO instruments. [Hence it is acknowledged that as well as the harsh physical polar environment posing additional hazards to the ship, its crew, passengers and cargo, the fragile polar marine ecosystems are subject to additional hazards posed by the ship.]

5 While Arctic and Antarctic waters have a number of similarities, there are also significant differences. Hence, although the Code is intended to apply as a whole to both Arctic and Antarctic, the legal and geographical differences between the two areas have been taken into account.

6 The key principles for developing the Polar Code has been to use a risk-based approach in determining scope and to adopt a holistic approach in mitigating all risks to acceptable levels/minimizing risks.

7 (The Code focuses on ship systems but acknowledges that the safety of crew, ship and cargo and the protection of the environment and ecological systems also draws on systems external to the ship such as communication and navigation systems as well as search and rescue and pollution response capability.)

8 Part A of this Code has been developed to supplement the requirements of SOLAS, MARPOL and other relevant conventions for ships to which those Conventions apply, taking account of the additional hazards in polar operating environments.

9 Part B of this Code has been developed to provide for additional guidance in applying the requirements of Part A.

10 ...

11 ...

Part A

Mandatory requirements regarding the provisions of ...

1 General

1.1 Introduction

This part of the Code contains the mandatory provisions to which reference is made in … relevant parts of SOLAS and MARPOL (when amended).

1.2 Objectives

The objective of this Code is to ensure safety of life during operation in polar waters and preserve its marine environment and ecological systems.

1.3 Functional requirements

In order to achieve its objective, this Code embodies a number of functional requirements and, where possible, supplemented with prescriptive accepted solutions addressing the environmental conditions deviating from those outside the polar areas, including but not limited to:

.1 all ships operating in polar waters should be suitable for the intended operation and have structural arrangements adequate to resist the global and local ice loads and ensure safe performance and appropriate resistance to failure of the hull envelope for the purposes of maintaining stability and preserving the environment;

.2 all essential systems and shipboard equipment shall be capable of functioning effectively in low temperature;

.3 all ships operating in polar waters should be able to maintain sufficient manoeuvrability in ice through the design of the propulsion and steering systems capable of withstanding ice impact and sustaining and reversing the thrust in all ice conditions of intended season and region of operation;

.4 all ships operating in polar waters should have the ability to render assistance, including icebreaking assistance, to other vessels;

.5 ships operating in polar waters should be fitted with life-saving appliances capable to perform their functions at the minimum anticipated service temperature; and

.6 any negative effect on the environment or ecological systems due to normal operation shall be avoided.

Alternative 1

1.4 Environmental condition/ additional risks:

.1 Environmental conditions/additional risks/environmental hazards considered in this Code include:

.1 low air and/or water temperatures (depending on season), seasonal effects including long periods of light in summer and dark in winter;

.2 strong wind/wind chill effect and rapidly changing weather conditions;

.3 ice-covered water surface and/or floating ice sheets;

.4 icebergs;

.5 ice on deck/superstructure/equipment on open decks (effect of ice loading on hull, propulsion and sea suctions);

.6 reduced search and rescue capabilities/proximity to SAR/reduced search and rescue capability;

.7 reduced spill preparedness;

.8 reduced infrastructure;

.9 SAR capabilities and communication capabilities (in particular accurate weather forecasting at high latitudes in the southern hemisphere is very difficult due to limited coverage from satellites and coverage from ships or ground stations);

.10 reduced navigational systems capabilities (needs clarifications);

.11 inadequate charts/hydrographic information;

.12 reduced manoeuvrability;

.13 effects on sensitive ecosystems due to:

.13.1 spill of oil or chemicals;

.13.2 loss of packaged dangerous goods;

.13.3 discharge of ballast water, sewage or garbage;

.13.4 air pollution;

.13.5 bio-fouling;

.13.6 noise; and

.13.7 miscellaneous;

.14 machinery preparedness;

.15 impaired logistic support;

.16 tender operations between ship and shore transfer of passengers, crew, stores and equipment to/from the ship/shore; and

.17 ...

Alternatively:

1.5 Additional hazards:

.1 The purpose of the Code is to prevent or mitigate the consequences of hazards not particularly covered by other instruments of the Organization.

.2 The safety and environmental measures considered by the Code are mainly related to the particular weather conditions, environmental sensitivity, and remoteness of polar navigation, including, but not limited to, the following hazards:

.2.1 low water temperature affecting hull material behaviour and survival in water;

.2.2 low air temperature, glazing, and ice storms affecting survival in case of abandonment of the ship, deck equipment operation, visibility, and ship stability;

.2.3 strong winds and rapidly changing weather conditions affecting normal ship operation (propulsion, manoeuvring, anchoring, etc.) and the possibility of avoiding dangerous weather conditions;

.2.4 large ice-covered water surface requiring special ship design for propulsion and hull strength in order to avoid getting stuck;

.2.5 ice floating sheets that may produce hull damage or damage to propulsion/steering devices;

.2.6 reduced search and rescue capabilities affecting prompt assistance in case of casualties in remote areas or areas with very low traffic density and involving the need of considering some safety redundancy;

.2.7 reduced spill preparedness involving the need to consider additional preventive measures for the ship;

.2.8 reduced infrastructure and communication capabilities impacting on the ship communication equipment and the strategy/procedures of the Company;

.2.9 reduced navigational aids and insufficient chart information impacting on officers training and navigational equipment needs;

.2.10 effects of particular dangerous cargo on sensitive ecosystems impacting on the need of additional preventive safety measures for the transportation of such cargoes;

.2.11 effects of normal operation on sensitive ecosystem and possible need for additional safety measures due to discharges, air pollution, noise, etc.; and

.2.12 long daylight/darkness periods affecting bridge officer performance.

.3 The hazards listed are not exhaustive and their consequences should be assessed depending on the ship type and size, hull impact resistance, season, time and frequency of exposition, and navigational area, among others.