



SUB-COMMITTEE ON SHIP DESIGN AND
EQUIPMENT
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Agenda item 13

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DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING IN POLAR WATERS

Environmental aspects of the Code

Submitted by Norway

SUMMARY

Executive summary: This document proposes a way forward on how to address the environmental aspects in the development of the polar Code, within the foreseen time schedule

Strategic direction: 5.2

High-level action: 5.2.1

Planned output: 5.2.1.19

Action to be taken: Paragraph 5

Related documents: MEPC 60/21/1 and MEPC 60/22, section 21

Background

1 At MEPC 60, the Committee discussed briefly a submission from Norway, document MEPC 60/21/1, providing an overview of various environmental issues to be considered and possibly addressed in the new mandatory Code for ships operating in polar waters and agreed to refer the document to the DE Sub-Committee for consideration under its agenda item "Development of a mandatory Code for ships operating in polar waters". As a follow up to the submission to MEPC 60, this document is submitted in an attempt to find a way forward on how and by whom the various environmental aspects should be addressed in order to meet the foreseen time schedule.

2 Taking into account the fact that the MARPOL Convention and the International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention) already apply to the polar waters, and that other environmental conventions, such as the International Convention for the Control and Management of Ships' Ballast Water and Sediments adopted in 2004, and the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009, will apply to the polar waters (as well as all other sea areas) when they enter into force, the environmental chapter in the new Code should address any additional requirements deemed necessary to ensure environmental friendly operation in the areas under consideration.

3 Hence, as Norway sees it, the following analyses should be carried out in order to prepare for the development of a meaningful environmental chapter in the code:

- .1 what extra burden is put on the marine environment in the polar region because of its unique temperature-, light- and ice-conditions?
- .2 how can this burden be taken care of or eased by the Code (if possible)?
- .3 which amendments are deemed necessary in existing instruments to achieve this?
- .4 which policy decisions are needed to go forward?

4 By running this analysis through the appropriate instruments, the Sub-Committee can form a clear picture and advice as it deems necessary. The following analysis and consequential suggestions are offered at this stage:

4.1 MARPOL ANNEX I

Consider if the MARPOL regime, regarding on board emergency plans and equipment is adequate for polar shipping (MARPOL Annex I, chapter 5, regulation 37) taking into consideration possible adverse effect of oil spill to the environment compared to other regions of the world.

Part D of the existing guidelines for ships operating in polar waters addresses oil pollution. There are a number of terms in the present guidelines that would need some clarification in a legally binding context.

Suggestion: It could be suggested that advice on this matter is sought from the OPRC working group. It is further suggested that they look at this at one session only and refer back to DE at their earliest convenience.

4.2 MARPOL ANNEX I and II

Combating both oil spills and spills from MARPOL Annex II, cargoes could be complicated and time-consuming in the Polar Regions, given the environmental conditions and the lack of emergency preparedness capacity and possibilities in the area. Possible adverse effect of spills to the environment in these areas should be analysed and suitable mitigating measures determined.

Norway, being one of the coastal States in the Arctic, realises that large parts of what is regarded as Arctic is densely populated and industrialized, including oil exploration and exploitation, oil terminals and refineries, mining and other heavy industries, and that oil is an important product both for internal Arctic use and for exportation. Furthermore, we realize that at a future stage chemical industries might be established in the area having quite legitimate needs for transport by sea. At present, however, there are little or no trans-Arctic transportation of Annex I and Annex II cargoes (from, i.e. China or Japan to Europe and vice versa). If at a future stage the sea ice conditions make trans-Arctic shipping movements in international waters economically viable and feasible, Norway is of the opinion that that situation should be met by some sound thinking and that IMO as a precautionary measure at least should analyse the options which are available.

Suggestion: It is suggested that at this stage possible adverse effect of oil and Annex II spills are analysed and possible precautionary measures should be considered as necessary. It is proposed that this task is forwarded to the BLG Sub-Committee. The BLG Sub-Committee should inform this Sub-Committee on its work plan/time schedule for such work at the earliest possible time.

4.3 **Packaged dangerous goods**

Loss of containers with packaged dangerous goods, or indeed other floating objects in the high Arctic region with limited areas of open water, might lead to additional pressures on the fragile nature of the environment, i.e. the marine mammals that depend on open waters for air, the ice dependent flora and fauna (Ice Edge Dwellers) etc.;

During transportation of packaged dangerous goods, etc., in containers, heavy weather conditions and other external factors may lead to loss overboard of containers and their content. Polar areas are infamous for their polar low pressures (very local strong winds). If the amount of containership traffic increases, losses will occur. When containers, including packages of dangerous goods are lost in open sea, they either float around until filled with water and then sink, lose their content so that the packages float around until either they reach land or sink because of water inflow, etc. In polar waters, the ice would be a complicating factor. Open sea is in these areas in scarcity and often used by marine life for several purposes including as breathing holes, or as resting places for, i.e. right whales, etc. The presence of containers or IMDG packages may interfere with their activities or lead to damage. The question to be answered is whether the present design is sufficient or whether some additional design criteria should be added to container vessels destined for polar shipping.

Suggestion: These questions could be forwarded to the DSC Sub-Committee's container Working Group, and it is proposed that they get one session to provide guidance. In the report it is also expected that they provide (if applicable) a work plan and timetable.

4.4 **Discharge of sewage**

Do the present MARPOL requirements regarding discharge of sewage (Annex IV) provide the Arctic marine environment with adequate protection, considering that the low light and low temperature conditions, at least in parts of the year, would slow down natural decomposition of the sewage? Could grey water from larger passenger vessels disrupt the surface waters because of its relatively high temperature and low salinity?

Opening up of the polar areas for more shipping includes, *inter alia*, traffic of large passenger vessels (cruise ships), which produce several categories of waste controlled by MARPOL Annexes IV and V (predominantly). At present, Annex IV of MARPOL does not control discharges of grey water. These discharges will take place in areas where elevated temperatures in itself may be regarded as an environmental disturbance factor. In addition, the grey water will include high concentrations of detergents that in many cases will reformate into strong nutrients. Annex IV, therefore, raises two questions to be addressed: whether the regulations controlling black water are sufficient, and the question of grey water?

Suggestion: There is no Sub-Committee suitable to answer these questions or give adequate advice, so it is either suggested that this Sub-Committee looks into the questions itself (the working group), or that the MEPC is asked for its advice.

4.5 **MARPOL ANNEX V**

MARPOL Annex V allows discharges of floating garbage at certain distances from land. Would MARPOL Annex V regulations be regarded as adequate in polar waters with the strong presence of ice, in what is regarded as high seas? Floating garbage in open near-ice waters could seriously impact marine mammals using the same areas for food harvesting or breathing;

NOTE: The question posed regarding Annex V has its origin in the present Annex V. This might change during the Annex V revision that currently takes place.

Suggestion: For the time being, the best way forward may be to forward this question to MEPC 62 for advice. At MEPC 62, a working group on revision of Annex V is foreseen.

4.6 *Miscellaneous*

Soot and particles are often mentioned as a major pollutant in Polar Regions because of their effects on ice melting. One question to be answered would then be: are additional regulations needed regarding air pollution (MARPOL Annex VI) in polar regions?

One pollutant often highlighted in the Arctic is soot and particles from combustion of carbon. Soot and particles will adhere to the ice surface and increase, e.g., melting caused by the sun. These particles may also harm the more fragile organisms in the ice. What magnitude this problem poses and whether there are additional regulations required, may be answered by the Annex VI working group working at the MEPC.

Suggestion: This question may therefore also be forwarded to the MEPC to obtain advice.

Action requested of the Sub-Committee

5 The Sub-Committee is invited to:

- .1 consider the proposal in paragraph 3 on how to analyse the possible environmental implications of polar operations in preparing the Code (paragraph 3);
 - .2 consider the various suggestions in paragraph 4; and
 - .3 take action as deemed appropriate.
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