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**DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING
IN POLAR WATERS**

Environmental protection chapter

**Submitted by Friends of the Earth International (FOEI), the International Fund
for Animal Welfare (IFAW), the World Wide Fund for Nature (WWF)
and Pacific Environment**

SUMMARY

Executive summary: In this document, FOEI, IFAW, WWF and Pacific Environment propose specific requirements in the context of chapter 15 of the draft Polar Code (annex 1 to document DE 56/10/1) on environmental protection

Strategic direction: 5.2

High-level action: 5.2.1

Planned output: 5.2.1.19

Action to be taken: Paragraph 17

Related documents: MEPC 60/4/24; DE 54/13/8, DE 54/13/9, DE 54/INF 5; DE 55/12/3, DE 55/12/5, DE 55/12/16, DE 55/12/18, DE 55/12/20, DE 55/12/21; DE 56/10/1, DE 56/INF.3 and DE 56/INF.14

Introduction

1 This document¹ is submitted in accordance with the provisions of paragraph 6.12.5 of the Guidelines on the organization and method of work of the Committees and their subsidiary bodies (MSC-MEPC.1/Circ.4) and provides comments on the report of the correspondence group (DE 56/10/1).

¹ The preparation of this document for the IMO's DE Sub-Committee was assisted by the Antarctic and Southern Ocean Coalition (ASOC), an umbrella NGO with expert observer status at the Antarctic Treaty Consultative meetings (ATCM) and meetings of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

Proposal for an environmental protection chapter for inclusion in the Polar Code

2 The co-sponsors welcome documents DE 56/10/1 and DE 56/INF.3, and, in addition, the co-sponsors support the note that: "This whole chapter needs a thorough discussion." It has not yet been possible for an in-depth discussion to take place on the environmental protection requirements for polar waters.

3 Most of the environmental protection measures in place currently were developed with temperate or tropical waters in mind since this is where the bulk of shipping traffic operates. Recently, as the volume and nature of shipping traffic in polar waters has increased and significant reductions in sea ice extent have allowed for even greater levels of traffic, it is necessary to consider the additional measures required to appropriately protect polar waters which demonstrate a greater sensitivity to a range of harmful substances arising from vessels. Document DE 54/13/8² summarizes the additional protective measures that have been introduced via the MARPOL Convention Annexes I, II and V to provide additional protection in Antarctic waters, while document DE 54/13/9³ refers to measures introduced through the Antarctic Treaty and CCAMLR to address ballast water management in Antarctic waters. However, until now a systematic assessment of the threat to polar waters from the full range of vessel operations has not been undertaken; however, the report of the hazard identification workshop held in Cambridge in September 2011 provides such a basis for DE and the Working Group's consideration. This document makes reference to a range of previous submissions to DE and MEPC addressing environmental protection in polar waters, and proposes specific requirements in the context of chapter 15 of the draft Polar Code (annex 1 to document DE 56/10/1) on environmental protection⁴.

Oils, noxious liquid substances and packaged dangerous goods

4 Paragraphs 15.3.3 and 15.3.4 of annex 1 propose prohibitions of discharges of noxious liquid chemicals and oils or oily mixtures in line with existing provisions within MARPOL Annex I and Annex II for the Antarctic Special Area. Document DE 54/13/8 provides background information on the volume of oily discharges from cruise vessels and the impact of oils and harmful substances on sensitive polar waters. The co-sponsors submit that the Polar Code should ensure that the level of environmental protection already provided for Antarctic waters is also provided for Arctic waters. In addition, the co-sponsors welcome paragraph 15.3.5 which refers to the need for no leakage of harmful substances from stern tube bearings, and in addition recommend the use of biodegradable or water-based stern tube oil.

5 Paragraph 15.3.12 of annex 1 refers to the need to consult DSC on efforts to address packaged goods, and the co-sponsors believe that ongoing work in DSC should consider the need for special measures in Arctic waters.

6 Co-sponsors have also called for a ban on the use of heavy fuel oil by vessels in Arctic waters and requested consideration of carriage restrictions in certain ecologically and culturally important areas of the region (see document DE 54/13/8 and separate submission to DE 56).

² The waters south of 60° South are designated an Antarctic Special Area for the purpose of MARPOL Annex I, II and V and a recent amendment to MARPOL Annex I prohibits the carriage and use of heavy-grade oils in these waters.

³ Antarctic Treaty Consultative Meeting, Resolution 3 (2006) and CCAMLR Resolution 28/XXVII.

⁴ Further information is also available in Environmental Protection for Polar Waters. Proposals for provisions for inclusion in an environmental protection chapter of the mandatory Polar Code, September 2011. Available at: http://www.asoc.org/storage/documents/IMO/Polar_Code_Workshop_eNGO_Briefing_Sept_28.pdf.

Sewage, sewage sludge and grey water

7 Paragraph 15.3.7 of annex 1 refers to the need to avoid discharges of untreated sewage and grey water while 15.4 contains proposals for consideration on regulations or requirements. The co-sponsors refer to document DE 54/13/8, which highlighted that polar waters are less tolerant to rapid changes in the nutrient status of the water column or seabed than other marine environments. Furthermore, synergistic problems are likely as water temperatures increase. In addition, these discharges can be vectors for the introduction of alien species. It is also important to understand that sea ice creates a specialized habitat for phytoplankton, which are consumed by krill – the central element of the Antarctic food web which supports most of the great whales, seals, penguins and other species. Changes in nutrient status of these waters could result in direct disruption of existing balances and could exacerbate ongoing changes resulting from global climate change.

8 The co-sponsors support the need for provisions in the Polar Code regulating discharges of sewage, sewage sludge and grey water in polar waters and refer to document DE 55/12/5 from Norway and document DE 55/12/3 from New Zealand. They propose controls on discharge of sewage in polar waters including banning discharge within a specific distance of land or ice-cover, and recommend Special Area Status under MARPOL Annex IV where stricter controls are applied. In addition, documents DE 54/13/8 and DE 55/12/20 include specific proposals such as enhanced wastewater effluent standards in polar regions for vessels carrying more than a specified number of people and creating "no discharge zones" for the most sensitively and biologically rich areas (e.g. marine protected areas).

9 The co-sponsors strongly support further consideration of the regulation of discharge of grey water which can contain faecal coliform bacteria, oil and grease, detergents, nutrients, metals and food waste, in polar waters and believes that application of the highest environmental standards through regulation is necessary in these waters.

Garbage including food wastes

10 Antarctic waters are a Special Area under MARPOL Annex V requiring more stringent measures with respect to the discharge of garbage. In addition, annex 1 to document DE 56/10/1 refers in paragraph 15.3.6 to the fact that the newly revised MARPOL Annex V includes stricter discharge requirements for the Antarctic Special Area with respect to the discharge of avian products which are not allowed unless they have been made sterile.⁵ Special Area status should apply for Arctic waters since the threat is similar in both regions. Consideration should also be given to prohibiting discharge of food wastes in polar waters.

Air emissions (black carbon, SO_x and NO_x)

11 Paragraph 15.3.8 of annex 1 to document DE 56/10/1 refers to emissions of both black carbon and SO_x and NO_x in a polar context, indicating that further discussions are required. In highlighting the impacts of black carbon emissions on the Arctic climate, document MEPC 60/4/24 from Norway, Sweden and the United States proposes that several approaches are possible to reduce these emissions such as lowering fuel consumption and through specific pollution control measures. The co-sponsors support the inclusion of specific provisions to reduce the impact of black carbon in polar regions and also further consideration of provisions to address SO_x and NO_x emissions in the most vulnerable areas.

⁵ Additionally, the Antarctic Treaty (AT) Environmental Protocol Annex II requires that avian products be removed from the AT area, incinerated, or treated to an equivalent level of risk.

Underwater noise

12 Although both documents DE 54/13/9 and DE 55/12/3 refer to the need for additional regulation of underwater noise and the impact on marine wildlife, there is currently no reference to possible approaches to reduce vessel disturbance to marine life in polar waters in the draft of chapter 15. Such approaches are supported by the Arctic Council's Marine Shipping Assessment 2009 Report and summarized in document DE 54/13/9⁶. Major populations of marine mammals and seabirds are located in polar regions. Disturbance can be substantially reduced by avoiding localized areas of high concentrations of these species.

13 The co-sponsors propose that consideration be given to measures in the Polar Code to reduce disturbance to major populations of marine wildlife which have previously not been exposed to significant levels of underwater noise associated with shipping. Measures to reduce disturbance in areas of high wildlife concentrations may also help reduce the risk of ship strikes to vulnerable species such as large whales.

Ballast water discharges

14 Paragraph 15.3.11 of annex 1 to document DE 56/10/1 addresses ballast water and refers to the Ballast Water Management Convention but recognizes in Note 119 that it is not yet in force. Document DE 54/13/9 identifies that additional efforts have already been taken by the Antarctic Treaty Parties and Members of the Commission for the Conservation of Antarctic Marine Living Resources which effectively ensure that the provisions of the Convention are applied in Antarctic waters ahead of entry into force. This of course is only relevant to ships flying the flag of those countries. Due to the potential for major ecological impacts as a result of the introduction of alien species in pristine polar waters and the fact that the risk is likely to increase as water temperatures increase, the co-sponsors believe that the Polar Code should apply the provisions of the BWM Convention to these regions.

Anti-fouling systems

15 Paragraphs 15.3.9 and 15.3.10 of annex 1 to document DE 56/10/1 refer to anti-fouling systems resistant to mechanical damage and the use of biocide-free systems. In document DE 54/13/9 the co-sponsors recommended consideration be given to measures addressing biocide-free systems in polar waters, and have also recognized the need to address mechanical damage to antifouling systems through ice damage.⁷ We ask that the hull-coating system in use be highly resistant to abrasion and mechanical damage typical of ice-going conditions; that no heavy metals or other biocides be discharged into these waters and therefore anti-fouling systems used should not contain these substances; and that anti-fouling systems should prevent the spread of aquatic invasive species in polar regions and provide maximum fuel efficiency, thus helping to reduce harmful air emissions.

16 More traditional ablative biocidal coatings, self-polishing co-polymers and other biocidal paints are unsuitable for ice operations as they are soft coatings which will easily scrape off, leaving large deposits of toxic contaminants in the ice. Fouling release coatings should not be recommended as they are soft coatings and the silicone oils and other chemicals used in some of these coatings have been shown to be potentially toxic and they will not adequately protect the ship's hull. There are, however, hard ice abrasion-resistant

⁶ They include re-routing to avoid some areas in sensitive periods, lower speed, alternative engine and hull designs, a need to plan future shipping lanes to avoid large seabird colonies, marine mammal haul-outs and other areas where animals aggregate.

⁷ Environmental organizations also submitted another document on the subject to DE 56.

coatings which are being used successfully in Antarctica and in other ice-going regions. They have proved to be highly effective in hull protection, resistant to abrasion and mechanical damage, entirely non-toxic and, when combined with in-water cleaning of the hull and high-pressure jet cleaning of niche areas, are easily kept free of macrofouling. This makes them highly fuel-efficient and so has the added advantage of reducing air emissions from vessels using them.

Action requested of the Sub-Committee

17 The Sub-committee is invited to consider the information in this document during further deliberations on the draft Polar Code.
