

MARINE ENVIRONMENT PROTECTION COMMITTEE
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Agenda Item []

Information Paper on Southern Ocean Vessel Issues

Submitted by Friends of the Earth International¹

SUMMARY

Executive Summary: This paper sets forth information on the increased number and type of vessels operating in the Southern Ocean, and recent incidents. Given that IMO has designated the Southern Ocean a special area, the paper suggests subjects for the IMO to consider, including vessel ice-strengthening standards; banning use of heavier grade fuel oils; discharges of oily substances, sewage, graywater and waste; introduction of alien species through ballast water, hull fouling and other pathways; and establishment of a vessel traffic monitoring and information system for vessels operating in the Southern Ocean.

Action to be Taken: The information in this paper is provided as background for all delegations.

Related Documents: BLG 11/5/16, BLG 12/6/12

I. Introduction

1. Shipping traffic has increased significantly in the Antarctic over the past decade, including both large and small commercial tourism vessels, private yachts, fishing vessels - both authorized under the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and Illegal, Unreported and Unregulated (IUU), whaling fleets (catcher, processing and refueling vessels), research vessels, and vessels supplying Antarctic scientific research stations.

2. The increasing number of vessels, their concentrations in particular seasons and areas, and the fact that many are not ice-strengthened, raises a number of intrinsic environmental and marine safety issues given the realities of the environment in the region, the sensitivity of Antarctic ecosystems, and the vulnerability of marine mammals and other species to environmental degradation.

3. In 1990 the IMO designated the Southern Ocean south of 60 degrees South Latitude as a “special area” under Annexes I (oil) and V (garbage) under MARPOL 73/78, banning the disposal, at sea or on shore, of oily residues, chemicals and garbage from ships.² This laid the foundation for the IMO to establish appropriate rules concerning vessels operating in that region. To this point in time, few specific rules have been set by the IMO for the Antarctic. However, there was some progress in 2007, discussed below.

4. This paper sets forth information on the desirability of the IMO establishing additional rules for vessels operating in the Southern Ocean, including ice-strengthening standards; banning use of heavier grade fuel

¹ This paper was prepared for the IMO’s MEPC by the Antarctic and Southern Ocean Coalition (ASOC), an umbrella NGO with expert observer status at Antarctic Treaty Consultative Meetings and meetings of the Commission for the Convention on the Conservation of Antarctic Marine Living Resources, in collaboration with of ASOC members FoEI, Friends of the Earth U.S., Friends of the Earth Australia, Greenpeace and WWF.

² The amendments applying Annexes I and V entered into force March 17, 1992.

oils; preventing discharges of oily substances, sewage, graywater and waste; hull fouling; and establishment of vessel traffic monitoring and information system for Antarctic vessels.

II. Areas of Concern for Maritime Activity in the Southern Ocean

5. The main international environmental NGOs active in Antarctica and the Southern Ocean (ASOC, FoEI, Greenpeace and WWF) submit that the IMO should be concerned about the following sets of shipping issues:

- Ice-strengthening standards for Antarctic national program, tourism, fishing and other vessels – many of which lack the sort of ice-strengthening and/or double hulls that is appropriate in a specially sensitive area like Antarctica;
- Use of heavier grade fuel oils in the Southern Ocean, which if spilled pose a much greater risk to the marine environment than lighter grades of diesel fuel;
- Discharges of sewage and black water in the Southern Ocean;
- Disposal of wastes of various origins by vessels operating in the Southern Ocean; and
- Introduction of alien species through ballast water, bio-fouling or by other means into the Antarctic marine ecosystem.³

6. A further major area of interest for ASOC and its member groups is the absence of a comprehensive system of vessel traffic monitoring for Antarctic vessels that includes those vessels' relevant characteristics, which is essential for establishing, applying and enforcing better standards for vessels operating in the Southern Ocean. CCAMLR maintains a list of legal fishing vessels and some tracking capacity, but it is not easily accessible and is incomplete. There is no methodical listing of IUU vessels operating in the Southern Ocean. The International Association of Antarctica Tour Operators (IAATO) maintains a registry of its members' vessels, but their membership is not 100% of commercial Antarctic tour operators and it leaves out most private yachts cruising to Antarctica.⁴ The Council of Managers of National Antarctic Programs (COMNAP)⁵ maintains a list of many research and supply vessels but it is far from complete. Taken together, these lists are far from comprehensive and, as they were not created for the purpose of enhancing safety of life at sea and protection of the environment, the data included on each vessel varies widely.

7. ASOC suggests that further consideration of the desirability of establishing an Antarctic vessel traffic monitoring and information system is urgently required, given that no other body presently maintains such a system for Antarctic vessels. Related to this is the desirability of annual cumulative tracking of vessel activity. Given present tourism patterns, escalating fishing, and the locations of most research stations, vessel traffic in the Antarctic is concentrated in particular areas and belts, which are thus focal areas for evaluating and avoiding adverse impacts. The IMO could usefully discuss the modalities needed to create a universal system covering all vessels coming into the Southern Ocean.

³ See UK Information Paper presented to ATCM XXX, Hull fouling as a source of marine invasion in the Antarctic, http://www.scar.org/treaty/atcmxxx/Atcm30_ip037_e.pdf. Note that in 2001 the IMO completed an international treaty to phase out organotins that will become legally binding in September, 2008. See Toxic Ship Paint Found in Antarctic Sediment, <http://www.ens-newswire.com/ens/may2004/2004-05-24-04.asp>

⁴ <http://www.iaato.org/bylaws.html>

⁵ www.comnap.aq/

III. Role of the IMO on Antarctic issues

8. The Decisions and Measures adopted by the Antarctic Treaty Consultative Meeting (ATCM) and the Resolutions and Conservation Measures adopted under CCAMLR are in accord that protecting the Antarctic environment is a very high priority. Although some of these instruments are oriented towards establishing safety and environmental standards for vessels, the international expertise on this set of issues rests with the IMO. Therefore, it is essential for the IMO to work in closer cooperation and in concert with the Antarctic Treaty System's bodies to articulate appropriate standards.

9. Awareness of this need has been heightened by a number of recent shipping incidents in the Southern Ocean, most prominently the sinking of the M/S Explorer, a commercial tourism vessel, in November 2007, which resulted in pollution from the diesel fuel and other materials on board⁶ Other recent incidents include the November 2006 grounding of the M/V Lybov Orlova at Deception Island in the South Shetland Islands, from which she could not emerge under her own steam and required assistance after more than 15 hours aground;⁷ the grounding of the M/V Nordkapp, another commercial tourism vessel, in January 2007 at Deception Island, which resulted in the spillage of an unknown amount of marine diesel at Port Foster⁸; the M/S Fram, which lost power on December 30 along the Antarctic Peninsula and drifted into a glacier before restarting its engines, suffering some damage⁹; the UK-registered trawler Argos Georgia, which lost power while fishing in the Ross Sea on December 23 and required an air drop of a crucial engine part¹⁰; and a serious accident on the Nisshin Maru, the Japanese whale processing ship, in 2007, which suffered an explosion and fire with the loss of one life and lost power for several days while in an ice-covered area, but eventually was able to leave the Antarctic under its own power¹¹. These recent incidents demonstrate the potential for serious loss of life and adverse impacts on the marine environment from vessels operating in the Antarctic.

10. There is broad support within the Antarctic Treaty System's bodies for IMO to develop Antarctic Shipping Guidelines or an Antarctic Shipping Code, and we believe that given the dramatic increases in vessel traffic in the Southern Ocean and the recent accidents, there is political support for the IMO to address the set of issues raised in this Information Paper.

IV. Recent Developments

11. Few rules specific to the Antarctic have been set by the IMO to date. However, in 2007 the IMO Assembly adopted a resolution on *Guidelines on voyage planning for passenger ships operating in remote areas* and on July 13, 2007 the MEPC adopted Resolution MEPC.163(56), *Guidelines For Ballast Water Exchange in the Antarctic Treaty Area*. This Resolution includes language that sets out some of the basis for IMO action in the Antarctic.

12. Ballast Water Exchange

"BEING AWARE of the designation of Antarctica as a Special Conservation Area and of the measures adopted under the Antarctic Treaty to protect the Antarctic environment and dependent and associated ecosystems,

⁶ See Antarctic Treaty Secretariat Circular No. 29/2007 concerning "Sinking of M/S Explorer" and Circular No. 01/2008 concerning "Location of the wreck of M/S Explorer".

⁷ See Final Report of the XXX ATCM, paragraphs 110-114 and 151-152; and Argentina and others IP 108, Report of the Deception Island Antarctic Specially Managed Area Management Group, presented to ATCM XXX in New Delhi (2007).

⁸ See Antarctic Treaty Secretariat Circular No. 4/2007 concerning "Follow-up notice regarding the cruise ship incident at Deception Island. See also Final Report of the XXX ATCM, paragraphs 110-114 and 151.

⁹ See IAATO's January 2, 2008 Fram update.

¹⁰ See US Embassy, Wellington, NZ, USAF Antarctic Airdrop Rescues Stranded Ship http://wellington.usembassy.gov/fp_ant_rescue_flt.html

¹¹ See New Zealand IP 40 *Fire on Board the Japanese Whaling Vessel Nisshin Maru*, presented to ATCM XXX in New Delhi (2007).

BEING AWARE ALSO of the requirements of Annex II to the Protocol on Environmental Protection to the Antarctic Treaty regarding conservation of Antarctic fauna and flora and in particular of the precautions taken to prevent the introduction of non-native species to the Antarctic Treaty area...

CONSCIOUS of the potential for invasive marine organisms to be transported into, or moved between biologically distinct regions within the Antarctic Treaty area by ships in their ballast water...

1. *ADOPTS the Guidelines for ballast water exchange in the Antarctic Treaty area as set out in the annex to this resolution;*

2. *INVITES Governments to apply the Guidelines as soon as possible, as an interim measure for all ships entering the Antarctic Treaty area before the Ballast Water Management Convention comes into force; and*

3. *AGREES to keep the Guidelines under review.*¹²

13. Passenger Ships Operating in Areas Remote from SAR Facilities

The IMO also has released MSC Circular 1184 - *Enhanced Contingency Planning for Passenger Ships Operating in Areas Remote from SAR Facilities*, and MSC Circular 1182 - *Guidance to Recovery Techniques Using Equipment Currently Available*, which contain advice for tourism vessels operating in the Antarctic and other remote areas.

V. Further Consideration by the IMO of Southern Ocean Vessel Issues

14. Nothing so far establishes the types of standards that ASOC and its member groups submit are appropriate, or that some Antarctic Treaty Consultative Parties have recommended. For example, in 2006 the Australian Government promulgated an updated Marine Notice for vessels coming to Antarctica, which includes the following:

“It is strongly recommended that no vessel should proceed into the Antarctic Treaty Area unless:

(a) the Master and Navigating Officers have:

- training in high latitude navigation and ice operations (alternatively, an ice pilot with relevant experience of the area should be engaged);*
- adequate hydrographic and meteorological information for the intended voyage;*
- implemented watchkeeping procedures commensurate with the conditions;*
- adequate communications equipment and trained operators onboard; and*

(b) the shipowners have ensured that:

- the ship is properly strengthened for ice operations, preferably has a double hull below the water line for the full length of the vessel, no bunker fuel adjacent to the vessel's outer hull, IMO Special Purpose Ships (SPS) classification and adequate watertight compartments;*
- all the ship's lifeboats and life rafts are fully enclosed, suitable for cold climate use, surveyed and operational;*
- there are sufficient thermal protective survival suits for all on board;*
- there are adequate arrangements to handle any medical emergencies that may arise in the course of the voyage;*
- reserves of food, fresh water, fuel and spares for critical equipment are carried to provide for unforeseen delays and besetment; and marine pollution mitigation arrangements (including insurance) are in place in the event of a fuel or waste spill and the vessel has a Shipboard Oil*

¹² http://www.imo.org/includes/blastDataOnly.asp/data_id%3D19690/163%2856%29pdf

Pollution Emergency Plan (SOPEP).”

15. Recent events have created awareness within IMO to the need to assess Antarctic shipping. IMO Secretary-General Efthimios E. Mitropoulos, in commenting on the sinking of the M/V Explorer in IMO's *Briefing 46*, 26 November 2007, stated:

"[T]he good work of this Organization in regulating vital safety aspects, such as survival craft and arrangements, evacuation procedures and search and rescue operations should, in cases like the Explorer's, be acknowledged and appreciated."

"[The IMO is] eager and ready to receive the report of the investigation into the Explorer casualty and see what lessons may be learnt to enhance the safety of ships and operations in ice-covered waters prior to considering any new measures that may be required in the circumstances."

*"The fact that cruise ships, in increasing numbers, choose remote and sensational areas for their operations...made the need for expeditious action all the more important."*¹³

16. There is good precedent for IMO to consider the most appropriate actions it can take to further protect the marine environment and enhance safety of life at sea within the Antarctic Treaty Area, and to consider the best definition of the Southern Ocean for purposes of IMO competence.

V. Banning Use of Heavier Grade Fuel Oils in the Southern Ocean

17. As Friends of the Earth International described in BLG 11/5/16, bunker fuel, in particular Heavy Fuel Oil (HFO), has a detrimental effect on marine life when spilled into the sea. The nature of HFO – viscous, sticky, hard to degrade, long lasting, poisonous – means it a substance that sea animals and the marine environment cannot cope with.

18. The recent sinkings, groundings and other incidents involving vessels in the Antarctic are evidence of the increasing risk of fuel spills in the Southern Ocean. To prevent the potential harm from such spills into sensitive marine environments, on June 1, 2007 the Norwegian Government imposed a ban on the use of Heavy Fuel Oil onboard ships inside the two large nature reserves covering most of the territorial waters of eastern Svalbard. The Government also decided that ships sailing in these waters are not allowed to carry more than 200 passengers.

19. The purpose of these restrictions was to avoid spills of Heavy Fuel Oil and other heavy fuels to the vulnerable coastal environment of eastern Svalbard. As the Antarctic environment is subject to equal, if not greater threats from bunker spills from marine vessels, the Svalbard model should be considered for implementation in the Southern Ocean.

20. We suggest that the IMO consider what appropriate mechanisms could be utilized to begin a phase out and ultimate ban of the use of bunker fuel as soon as practicable in the Antarctic under its status as a special area.

VI. Discharges of Raw or Treated Sewage, Sewage Sludge and Graywater in the Southern Ocean

21. Under Article 6 of Annex IV (Prevention of Marine Pollution) of the Protocol on Environmental Protection, ships operating in the Antarctic are not allowed to discharge untreated sewage within 12 miles of land or ice shelves, and when discharging from a

¹³ Successful Antarctic rescue draws praise and highlights IMO's work
http://www.imo.org/Newsroom/mainframe.asp?topic_id=1472&doc_id=8743

holding tank the ship should have a speed of no less than 4 knots.

22. The Protocol is silent on treated sewage and graywater, both of which contain pollutants known to have the potential to harm the marine environment. Under Annex IV of MARPOL, ships can discharge sewage that has passed through an IMO certified marine sanitation device in any location. Between 4 and 12 miles from land, sewage must be comminuted and disinfected before discharge.

23. Graywater can be dumped anywhere because it is unregulated. Both sewage and graywater effluent from passenger vessels contain pathogens and pollutants that can be harmful to human health and the environment when discharged into the ocean. With increasing volumes of sewage and graywater being generated and discharged by larger cruise ships and other marine vessels, the potential environmental impact of these uncontrolled discharges should be evaluated and prohibitions considered to protect the long-term health of the Southern Ocean.¹⁴

VII. Closing remarks

24. This Information Paper raises a range of pressing issues concerning shipping in the Antarctica, for discussion and further consideration. Despite some recent positive developments, nothing so far establishes standards of the sort that ASOC and its member groups suggest are appropriate for the Southern Ocean, or that some Antarctic Treaty Consultative Parties have recommended. Over the next year, in the appropriate IMO fora, we will raise these issues with appropriate recommendations for action.

¹⁴ The U. S. Environmental Protection Agency has conducted voluntary sampling of cruise ship effluent from ships operating in Alaska, and recently published a Cruise Ship Discharge Assessment Report that found cruise ships routinely dump massive amounts of poorly treated sewage and highly contaminated raw graywater into harbors and coastal waters. The EPA found that cruise ship discharges contain concentrations of bacteria, chlorine, nutrients, metals and other pollutants that often far exceed federal effluent and water quality standards and are harmful to human health and the marine environment. The report estimated that each cruise ship produces an average of 21,000 gallons per day of sewage and 170,000 gallons per day of raw graywater that can contain as much bacteria as sewage. Large volumes of sewage sludge and oily water are also routinely dumped overboard. A majority of sewage samples taken by the EPA from cruise ships equipped with Coast Guard-and/or IMO approved marine sanitation devices (Type II MSDs) violated national effluent limits for both ship and land-based sewage—and often exceeded national water quality criteria at point of discharge. EPA determined that treated sewage and raw graywater from cruise ships contain such high concentrations of bacteria such as fecal coliform, contaminants like chlorine, and nutrients including ammonia that the discharges can degrade water quality, threaten shellfish beds and contaminate beaches and swimming areas—even when diluted.