Full steam ahead for the Polar Code – developing safety measures for fishing vessels and implementation of marine mammal avoidance measures

Submitted by ASOC
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Abstract

This paper provides a brief update on progress by the International Maritime Organization (IMO) on the development of safety measures for non-SOLAS vessels including fishing vessels, and considers current discussions on the implementation of marine mammal avoidance measures under the Polar Code. ASOC calls on the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and CCAMLR Members to:

- Support the development of measures by the IMO include fishing vessels in the Polar Code.
- Ratify the Cape Town Agreement.
- Strengthen CCAMLR Resolution 20/XXII to a conservation measure requiring Members only license vessels with a minimum ice classification standard of ICE-1C or more.
- Ask SC-CAMLR to contribute to expanded cooperation between the IMO and the Antarctic Treaty System on marine mammal avoidance planning.
- Ask SC-CAMLR to provide advice on appropriate marine mammal data collection and analyses and how they may best be made available to and used by the relevant stakeholders.

Introduction

In 2015, following a request by Iceland, New Zealand and South Africa, the International Maritime Organization’s (IMO) Maritime Safety Committee encouraged Member States and international organizations to submit data in relation to a second phase of the work on the mandatory International Code for Ships Operating in Polar Waters or “Polar Code” to address the development of safety measures for so-called non-SOLAS vessels. Non-SOLAS vessels are those vessels not covered (unless expressed otherwise) by the International Convention for the Safety of Life at Sea or SOLAS Convention, hence “non-SOLAS”. Fishing vessels are considered one category of non-SOLAS vessels.

Part I of the Polar Code, which was formally adopted in November 2014 and took effect from January 2017, sets out safety measures which apply to all SOLAS vessels, namely cargo ships and passenger ships. It includes regulations intended to address not only issues of maritime safety such as the structure, stability and operation of vessels, but also voyage planning, which incorporates protections aimed at mitigating the impact of shipping on polar marine environments and ecosystems.

This paper provides a brief update on progress by the IMO on the development of safety measures for non-SOLAS vessels including fishing vessels, and considers current discussions on the implementation of marine mammal avoidance measures under the Polar Code.

Polar Code Phase 2 – safety measures for non-SOLAS vessels

Fishing vessels in polar regions - the need for improved safety standards

Progressing the second phase of work on the Polar Code is an essential need in enhancing the safety of fishing vessels and their crews. Currently, more than half of the vessels operating in the Antarctic area are non-SOLAS vessels (fishing vessels and pleasure yachts). In the CCAMLR Area, the number of fishing vessels licensed for the December 2017 – November 2018 fishing season stood at 44. In the

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1 Lead author Sian Prior with contributions from Claire Christian, Dan Hubbell, Nicole Portley, Ricardo Roura, Eli Webster, and Rodolfo Werner.
Arctic, fishing vessels sail the greatest distance of any vessel sector\(^2\), for example in 2015 fishing vessels sailed more than 1.2 million nautical miles. Figures are not readily available for the Antarctic, however the total distance sailed by fishing vessels will be lower due to the lower numbers of vessels operating in the Antarctic, but it is likely that fishing vessels sail more nautical miles than any other vessel group in the Antarctic, as well as operating over a longer sailing season.

As the number of vessels operating in polar regions increases, the pressure on port states/coastal states will grow, for example in the areas of inspections, search and rescue, oil spill response, and general compliance and enforcement. There are concerns with reporting of fishing vessel casualties into the IMO casualty statistics\(^3\), and many violations of safety regulations have been observed. Of particular concern are operations in ice conditions that exceed vessel specifications, nearly half of all violations fall into this most serious category. There have been several serious incidents involving fishing vessels in the Southern Ocean in the past decade, including a number involving fatalities.

In view of these concerns and the risk polar fishing operations pose, there is greater compulsion than ever for the urgent development of safety measures for non-SOLAS vessels (Polar Code Phase 2). Such non-SOLAS vessels need to be brought under the umbrella of an international regime in order to ensure standard levels of compliance and operations within vessel capability in particular ice conditions. In addition, general seaworthiness and fit for purpose operation in polar conditions is required to lower the risk and reduce pressure on existing and developing future port/coastal state capabilities.

**Recent IMO progress on phase 2 of the Polar Code**

Since 2015, the IMO has been considering information related to incidents involving non-SOLAS vessels operating in polar waters. IMO work on the second phase of the Polar Code began in May this year at the meeting of the Maritime Safety Committee (MSC). The MSC concluded at this meeting that any safety measures for non-SOLAS vessels should apply to both Arctic waters and the Antarctic, and that the types of vessels to be considered in the development of safety measures for non-SOLAS vessels operating in polar waters are fishing vessels, pleasure yachts above 300 gross tonnage not engaged in trade, and cargo ships between 300 gross tonnage to 500 gross tonnage. MSC also noted views that safety measures for fishing vessels should be mandatory in polar waters, and a strong desire for the 2012 Cape Town Agreement to enter into force. In February 2019, the 6th session of the Ship Design & Construction Sub-Committee will start developing recommendatory safety measures for fishing vessels of 24 m or greater (as well as pleasure yachts above 300 gross tonnage not engaged in trade operating in polar waters).

**Aspects of maritime safety for non-SOLAS vessels**

Based on the provisions of the mandatory SOLAS and the earlier Polar Guidelines\(^4\), ASOC believes that areas to be addressed in the development of safety measures for fishing vessels should cover a broad range of safety issues including structural design and operational matters (Box 1).

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\(^2\) Arctic waters as defined by the International Code for ships operating in polar waters (Polar Code).

\(^3\) IMO III 4/15 paragraph 14.35 and 14.36.

Box 1. Safety measures for fishing vessels

- the need for a vessel specific polar waters operational manual
- ice classification
- structure of fishing vessels
- watertight and weathertight integrity
- vessel stability
- anchoring and mooring
- machinery and electrical installations
- propulsion systems
- fire safety / protection
- protection of ship’s personnel
- life-saving arrangements
- emergency procedures
- (safety of navigation and equipment⁵)
- (radiocommunications)
- towing
- manning and training
- (voyage planning)

Furthermore, ASOC proposes that Members reaffirm and strengthen CCAMLR Resolution 20/XXII to a conservation measure (CM) requiring Members only license vessels with a minimum ice classification standard of ICE-1C or more. A CM should address the overall minimum requirement for ice class for all vessels as well as a requirement for Members to notify the CCAMLR Secretariat of each registered fishing vessel’s ice class and for the information to be included in CCAMLR’s list of licensed vessels.

The Polar Code, voyage planning and marine mammal avoidance

Chapter 11 of the Polar Code addresses voyage planning and includes a provision on marine mammal avoidance in section 11.3.6 (IMO 2014). The provision requires Masters considering a route through polar waters to take into account ‘current information and measures to be taken when marine mammals are encountered relating to known areas with densities of marine mammals, including seasonal migration areas,’ (paragraph 11.3.6) and ‘current information on relevant ships' routing systems, speed recommendations and vessel traffic services relating to known areas with densities of marine mammals, including seasonal migration areas’ (paragraph 11.3.7). The Code also refers to the 2009 IMO guidance document on minimizing the risk to cetaceans from ship strikes (MEPC.1/Circ.674).

Especially with regard to ship strikes and noise mitigation, these requirements represent an important potential new point of collaboration between the Antarctic Treaty System (ATS) including CCAMLR and the IMO. Useful areas of discussion include the possibility of providing advice on polar areas ‘with densities of marine mammals, including seasonal migration areas’ (Polar Code Chapter 11.3.6). To assist in consideration of how CCAMLR can advance this topic, this paper provides information on agencies responsible for assessing polar marine mammals and how this information could be best conveyed to ships’ Masters. The following section is extracted from a submission to the 98th Session of IMO’s MSC.

⁵ Mandatory measures for items in parentheses, including safety of navigation and equipment, radiocommunications, and voyage planning, will be considered at the next IMO MSC meeting in 2018, and possibly considered further at the sub-committee on Navigation, Communication and Search & Rescue (NCSR) which meets in January 2019.
Implementing polar marine mammal avoidance

To implement the marine mammal avoidance provision of the Polar Code, information on population trends, spatial densities and seasonal migrations of Arctic and Antarctic marine mammals, including large and small cetaceans and seals, is required. As originally proposed by the United States in 2011, implementation may necessitate ‘creating and/or sharing similar cetacean density maps, perhaps through a common database’ (DE 56/10/19). All polar nations collect at least some information on marine mammal populations. However, this information is generally uncoordinated and fragmented across species, populations and geographic regions. In addition, climate change is likely to increasingly influence polar marine mammal spatial and temporal distributions. Therefore, the regular collection and exchange of new data is therefore important to detect such changes, particularly as species responses can be unpredictable (Hauser et al., 2016).

Examples of collated information on marine mammal populations

Antarctic data sets on marine mammal populations are currently disaggregated, although efforts are underway to improve collation. In the Southern Ocean, the process of bioregionalization has been undertaken which involves collating data for different physio-chemical and biological ecosystem elements, including marine mammals. Mapping of cetacean occurrence in the southern Ross Sea has been undertaken annually (Ainley et al., 2011). One valuable source of data is the Scientific Committee on Antarctic Research (SCAR), which includes an Expert Group on Birds and Marine Mammals (EGBAMM) that provides expert knowledge on all matters related to birds and marine mammals in the Antarctic region.

The International Whaling Commission (IWC) Southern Ocean Research Partnership (SORP) is also a regular source of new peer-reviewed science on cetaceans in the Antarctic region. Formally established in 2009, IWC-SORP is sponsored by 12 countries, and has produced 85 peer-reviewed scientific papers to date (Livermore, 2016). The Australian Antarctic Division conducted a circumpolar acoustic mapping project on blue and fin whale distribution from January to March 2017 (Miller et al., 2016). The website Happy Whale also hosts a platform for the tracking and upload of encounters of visitors to Antarctica with marine mammals that has a high number of cetacean and some pinniped sightings recorded in the Antarctica Peninsula region, with some records dating back several decades.6

Communicating marine mammal data to Masters

Marine mammal information must be made available to ship masters in a format that is accessible and useful for route planning. Information provided in advance of voyages can be used in planning, with up-to-date information communicated during voyages. Ensuring effective marine mammal avoidance planning will require a balance of providing tools and enacting enforceable regulations. Some existing tools are already in use by polar states that could be used to communicate marine mammal data to mariners, and other existing tools could be adapted to house information (examples include Notice to Mariners, adding marine mammal data to electronic navigation charts, development of mariners’ guides, graphics and apps). If a comprehensive data set were compiled for the polar regions, it could feed into these tools.

The Role of CCAMLR

SC-CAMLR could contribute to expanded cooperation between the IMO and the Antarctic Treaty System through further discussion on marine mammal avoidance planning in the Southern Ocean. This could include identification of available data sets on marine mammal densities and seasonal migratory routes to assist the implementation of the new provisions and requirements of the Polar Code.

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CCAMLR may further wish to provide advice on how appropriate data collection and analyses may best be made available to and used by the relevant stakeholders.

**Conclusion and recommendations**

It is four years since Part I of the Polar Code addressing safety measures for international shipping in polar regions was adopted, and the Code has been in effect for nearly two years. Yet, its provisions apply to less than half the vessels operating in the Antarctic area. In view of the risks posed by non-SOLAS vessels operating in polar regions, the development of safety measures for non-SOLAS is imperative. Non-SOLAS vessels operating in polar regions need to be brought under the umbrella of an international regime in order to ensure standard levels of compliance and operations. Ultimately ASOC believes that such measures must be made mandatory. For fishing vessels the most relevant international regulation would be IMO’s Cape Town Agreement.

With respect to the implementation of the Polar Code, the extension of the application of mandatory measures on navigation, communications and voyage planning to non-SOLAS vessels offers an opportunity for non-SOLAS vessels to be required to prepare a voyage plan. Within the plan including consideration of marine mammal populations, including population trends, spatial densities and seasonal migrations of polar marine mammals, including large and small cetaceans and seals. To assist Masters with the implementation of the voyage planning provisions, whether mandatory or recommendatory, CCAMLR should consider providing advice on polar areas ‘with densities of marine mammals, including seasonal migration areas’ should be considered, along with how this information could be best conveyed to ships’ Masters.

ASOC calls on CCAMLR and CCAMLR Members to:
- Support the development of measures by the IMO to ensure the best improvement in safety of fishing vessels operating in the Southern Ocean.
- Ratify the Cape Town Agreement as a matter of urgency.
- Reaffirm and strengthen CCAMLR Resolution 20/XXII to a conservation measure requiring Members only license vessels with a minimum ice classification standard of ICE-1C or more.

Furthermore, ASOC proposes that:
- SC-CAMLR contributes to expanded cooperation between the IMO and the Antarctic Treaty System through discussion on marine mammal avoidance planning in the Southern Ocean, including identification of available data sets on marine mammal densities and seasonal migratory routes.
- SC-CAMLR should provide advice on appropriate data collection and analyses and how they may best be made available to and used by the relevant stakeholders.