INTERNATIONAL MARITIME ORGANIZATION

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DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING IN POLAR WATERS

Voyage management and cetaceans

Submitted by FOEI, IFAW, WWF and Pacific Environment

SUMMARY

Executive summary:	This document provides information on cetacean activity in areas susceptible to marine vessel traffic, and recommends to the DE Sub-Committee that certain Polar Code provisions concerning vessel voyage planning and operations be considered in order to avoid interactions, especially collisions, with cetaceans and other marine mammals
Strategic direction:	5.2
High-level action:	5.2.1
Planned output:	5.2.1.19
Action to be taken:	Paragraph 10
Related documents:	DE 53/18/3; DE 54/13/3, DE 54/INF.5; DE 55/12, DE 55/12/1, DE 55/12/3 and DE 55/12/5

Introduction

1 This document[1] is a response to Norway's submission (DE 55/12/5), specifically its section on "Ship strikes", and is submitted in accordance with the provisions of paragraph 4.10.5 of the IMO Committees' Guidelines (MSC-MEPC.1/Circ.2).

[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 (whose members include FOEI, IFAW and WWF) 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). The Whale and Dolphin Conservation Society (WDCS) and Earthjustice also support this document.

2 In this document, FOEI, IFAW, WWF, and Pacific Environment highlight examples of cetacean activity in areas susceptible to marine vessel traffic, and recommend to the DE Sub-Committee that certain Polar Code provisions concerning vessel voyage planning and operations be considered in order to avoid interactions, especially collisions, with cetaceans and other marine mammals. The suggested provisions are based on the IMO guidance document for minimizing the risk of ship strikes with cetaceans (MEPC.1/Circ.674).

Ship strikes pose a substantial threat to cetacean populations

3 Records demonstrate that nearly all cetacean species are susceptible to ship strikes, and collisions with large whales may also result in considerable damage to vessels. In addition to mortality, collisions with vessels may inflict injuries including broken bones and propeller lacerations on cetaceans (MEPC.1/Circ.674).

Marine mammal activities that should be taken into account by ship operators in voyage plans and through operations

Migratory patterns

4 Co-occurrence between whales and ships in the Arctic will tend to increase as vessel traffic grows. However, particular areas within the Arctic pose a higher risk level for interactions, including ship strikes. For example, the Bering Strait functions as a bottleneck wherein both migrating whales (see Figure 1) and transiting vessels will overlap in tight confines, thereby elevating risk of harm to whales (see IWC 2010[2]). Spring migration routes for bowhead and beluga whales into Hudson Bay, Foxe Basin, and Lancaster Sound are also vulnerable to impacts from increased commercial activity, such as oil and gas development and shipping (AMSA 2009). In addition, as shipping traffic intensifies in the Canadian Arctic Archipelago "there will be increased potential for conflict between ships and marine mammals in narrow and geographically restrictive areas." (AMSA 2009). MEPC.1/Circ.674 describes information gathering on shipping and cetacean distribution patterns in order to assess risk, and such information should be taken into account prior to new shipping routes being developed.

Feeding grounds

5 In addition to migratory patterns through restricted island passages or straits, feeding grounds, such as those that exist north of the St. Lawrence Islands in the Chirikov Basin (Perryman *et al*. 2002) and act to congregate whales spatially and temporally, pose a risk for interactions. Areas just north of the Unimak Pass in the Aleutian Islands also function as feeding grounds for some whales, likely due to the localized upwellings that occur there (Friday *et al*. 2009). Feeding areas may, as well, change with the season, as they do for grey and North Pacific right whales in the Bering Sea (e.g., Zerbini *et al*. 2009). The AMSA report specifically finds that "[s]hip strikes of whales and other marine mammals are of concern in areas where shipping routes coincide with seasonal migration and areas of aggregation[,]" such as feeding grounds (AMSA 2009).

[2] IWC, 2010. Report of the Joint IWC-ACCOBAMS Workshop on Reducing Risk of Collisions between Vessels and Cetaceans. Available from http://www.iwcoffice.org/meetings/shipstrikes10.htm.

The ice edge and polynyas

6 In polar waters, certain types of cetaceans may aggregate at the seasonal ice edge or within ice of a particular degree of coverage or thickness, such as the substantial ice cover preferred by bowhead whales (e.g., Stafford *et al*. 2009). Whales may also aggregate in polynyas – typically coastal areas of open water surrounded by ice-covered waters – where they may reside until seasonal ice recedes (McGillivary *et al*. 2009). An increasing understanding of cetacean distribution patterns in relation to ice conditions and other remotely measurable habitat variables may help in identifying areas with high collision risk (IWC 2010).

Additional considerations by ship operators related to voyage planning and operations

Hunting

7 Several whale species are subject to direct hunting in polar waters and shipping-related mortalities will have implications for the impacts of hunting on population status. For example, AMSA has suggested that information on where shipping will co-occur with hunting and with crucial stages of the beluga migration "can be used to develop specific management and mitigation plans, perhaps including limitations on shipping to protect belugas and those who hunt them." (AMSA 2009). AMSA also notes that "any disruption of the spring and fall hunts [of bowheads], or any injury or mortality to bowheads would be considered a major issue to Alaskan and Siberian communities." (AMSA 2009).

Whale die-offs as a threat to vessel navigation in the Arctic

8 Evidence indicates that pronounced die-offs occur of whale species in the Arctic (e.g., Gulland *et al*. 2005). Along the U.S. West Coast, particularly within Alaskan waters, 273 and 361 grey whales were reported dead in 1999 and 2000, respectively (Moore *et al*. 2001). Due to strong currents within the Bering Strait, it is probable that these dead whales amassed in the shipping channels and posed a risk to navigation (McGillivary *et al*. 2009). Similar whale die-offs were reported in 2008 and 2009 among grey and bowhead whales, with a possible cause for some mortalities thought to be harmful algal blooms (Rosa 2008 & 2009). For the 2008 period, the number of reported dead bowhead whales exceeded that for the previous 25 years combined (Rosa 2008). Therefore, not only are there seasonal differences related to whale die-offs but also inter-annual variability, and voyage planning should take this into account for reasons of navigational safety.

Voyage planning and operations intended to avoid or minimize contact with marine mammals

9 The AMSA report states that "[a]s vessel traffic increases in the Arctic, modifications to customary vessel operation in key cetacean aggregation areas or vessel speed restrictions can be an effective measure to mitigate potential impacts on vulnerable species such as bowhead whales and, to a lesser extent, narwhals, beluga whales and other Arctic marine organisms." (AMSA 2009). These measures are consistent with those outlined in MEPC.1/Circ.674 and also recent international workshops on minimizing risks of collisions with cetaceans (e.g., IWC 2010). Several studies have shown that reducing speed decreases the risk of fatal or serious injuries to large whales (AMSA 2009). Speed restrictions have been imposed in some areas to reduce collision risk, and ship speed should be an integral feature in voyage planning designed to better protect cetaceans.

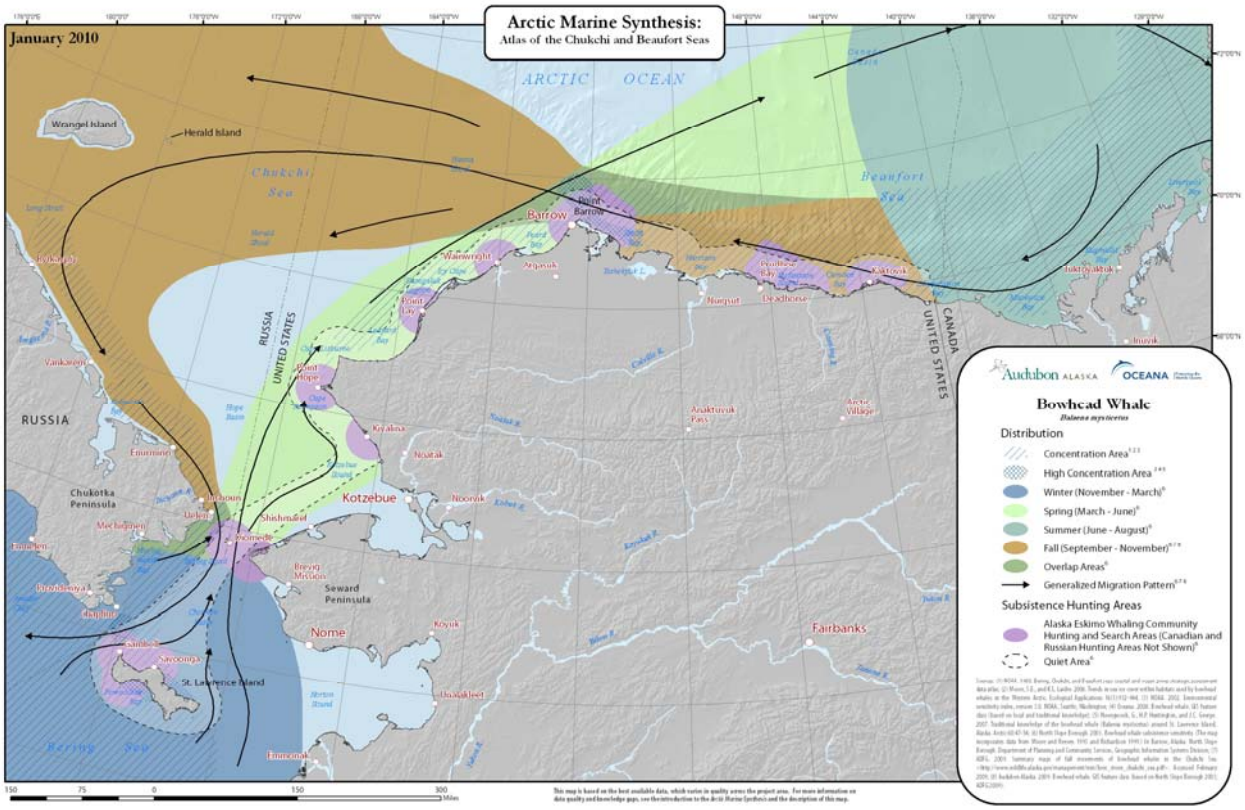

Figure 1 – Bowhead whale migration in the Bering, Chukchi, and Beaufort Seas

Action requested of the Sub-Committee

10 The Sub-Committee is invited to note the information provided and consider establishing certain Polar Code provisions regarding vessel voyage planning and operations in order to avoid interactions, especially collisions, with cetaceans and other marine mammals. Steps should be taken, as well, to encourage reporting of all collisions. These provisions should be based on MEPC.1/Circ.674. Further ongoing work by a number of bodies including the International Whaling Commission (IWC) is aimed at a better understanding of collision risk. The co-sponsors request IMO to work cooperatively with relevant IWC bodies on these matters.