Voyage Planning in the Polar Code: An Environmental Perspective

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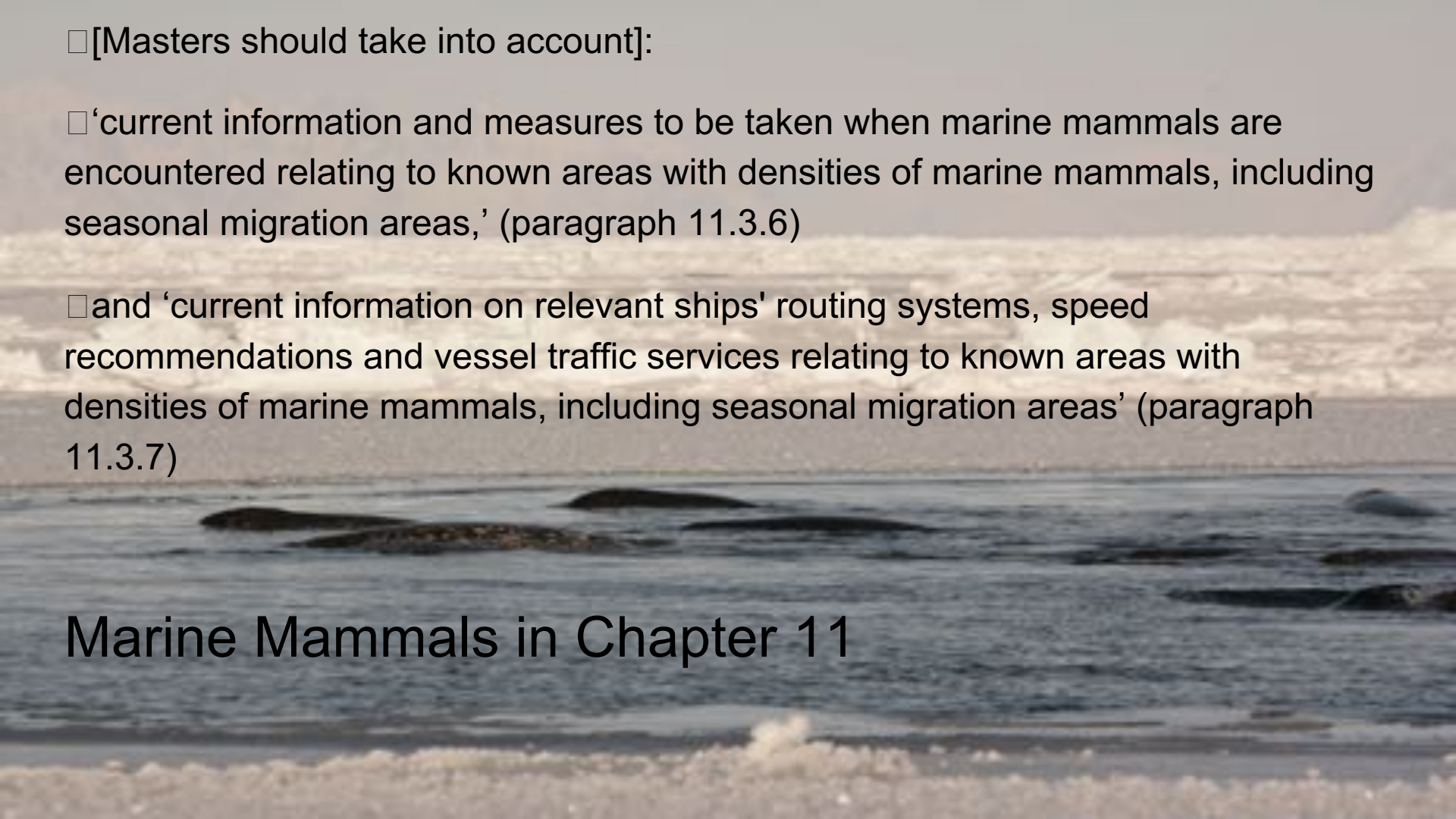
Polar Code and the Environment

- Categories of vessels (Definitions)
- Polar Water Operational Manual (Chapter 2)
- Damage stability (Chapter 4)
- Watertight and Weathertight Integrity (Chapter 5)
- Navigation (Chapter 9)
- **Voyage planning (Chapter 11)**
- Training (Chapter 12)
- Pollution Prevention (Part II A Chapters 1 - 5) and Part II B



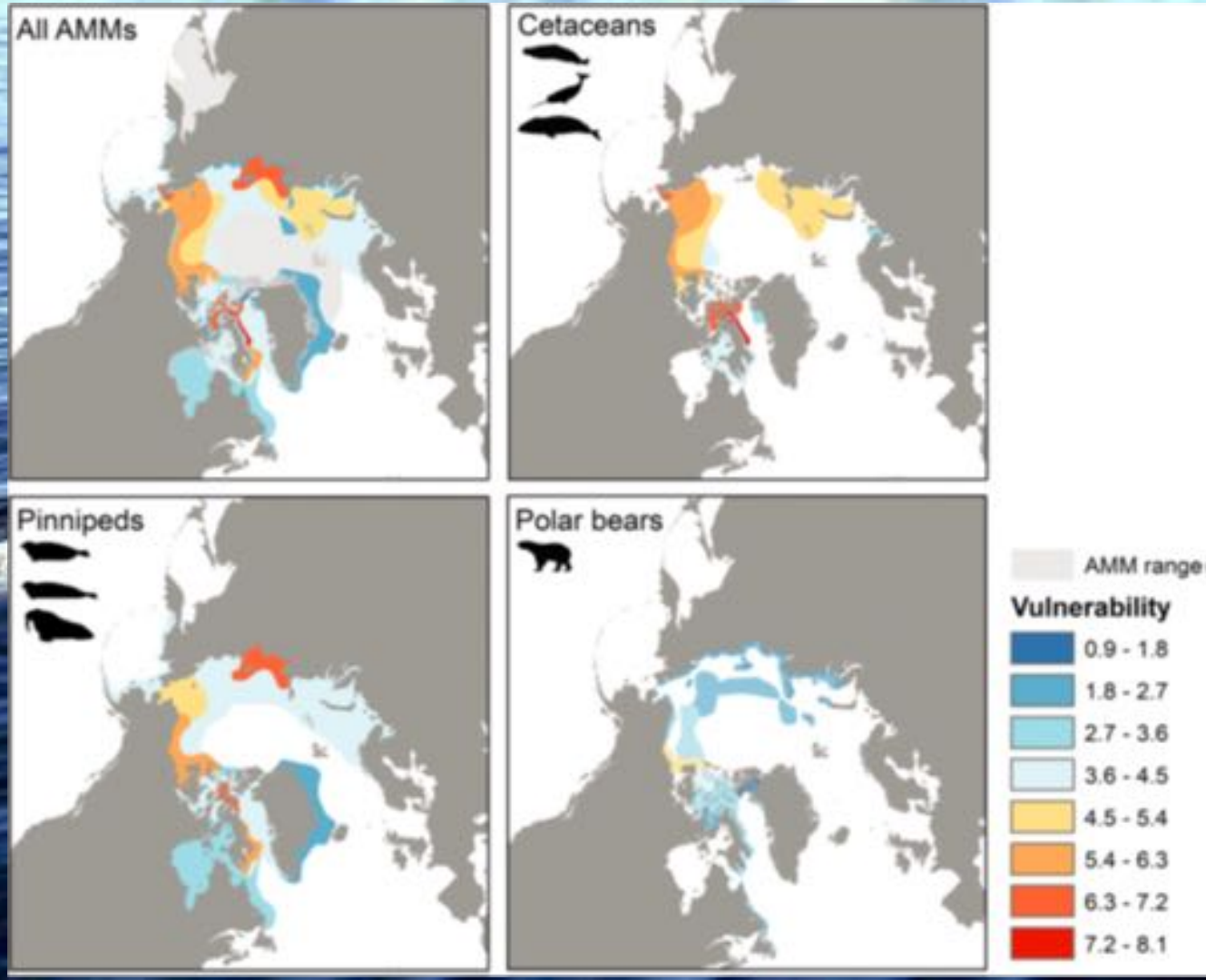
Marine Mammals in Chapter 11

- [Masters should 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)

Marine Mammals of the Arctic



From Hauser et al. 2018

Threats to marine mammals in polar regions

- Ship strike
- Underwater noise
- Disturbance (feeding, breeding, habitat)
- Pollution - oil / chemical spills, plastics
- Entanglement
- Climate change

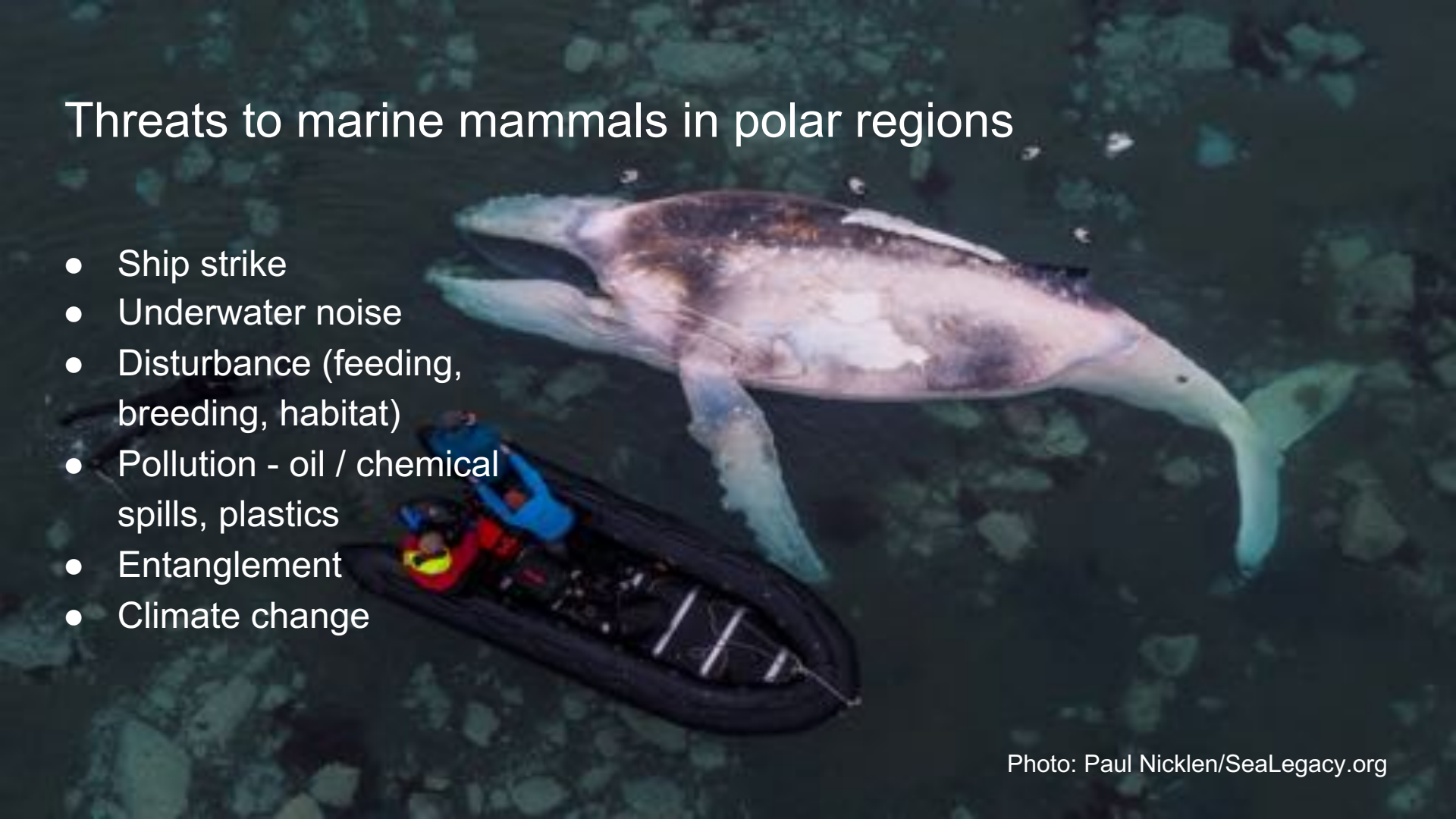


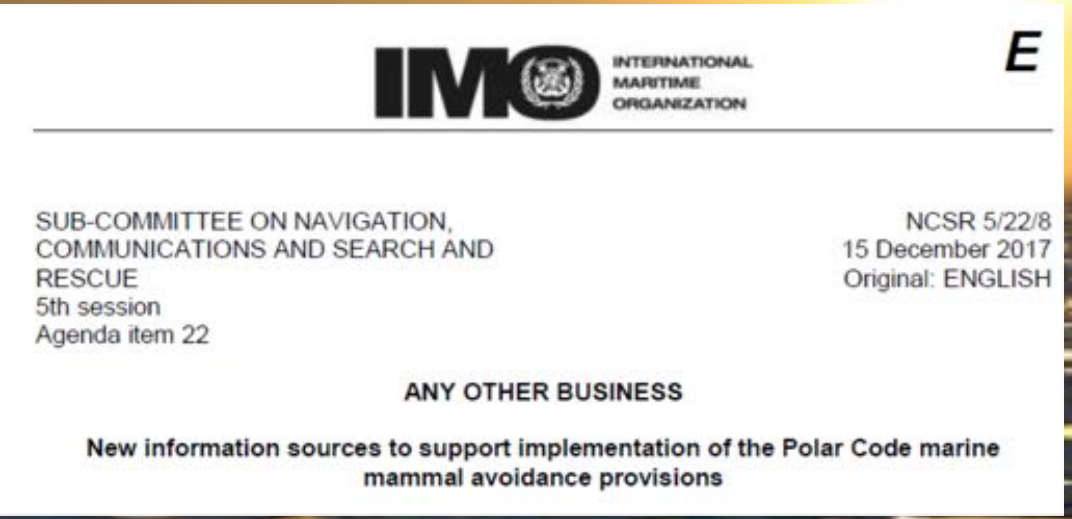
Photo: Paul Nicklen/SeaLegacy.org

Chapter 11 on the Forum

- 7 Sources on Marine Mammals
- Best Coverage in Canada, including WWF, Oceans North, Nunavut Pl
  Commission, and Canadian Hydrographic Service
- 1 each for Greenland, USA, and Norway/Svalbard
- 1 on Southern Ocean (CCAMLR)
- No Russian Data on Marine Mammals at Present

The Mariner's Guide

Awareness Raising and Workshops



IMO INTERNATIONAL MARITIME ORGANIZATION

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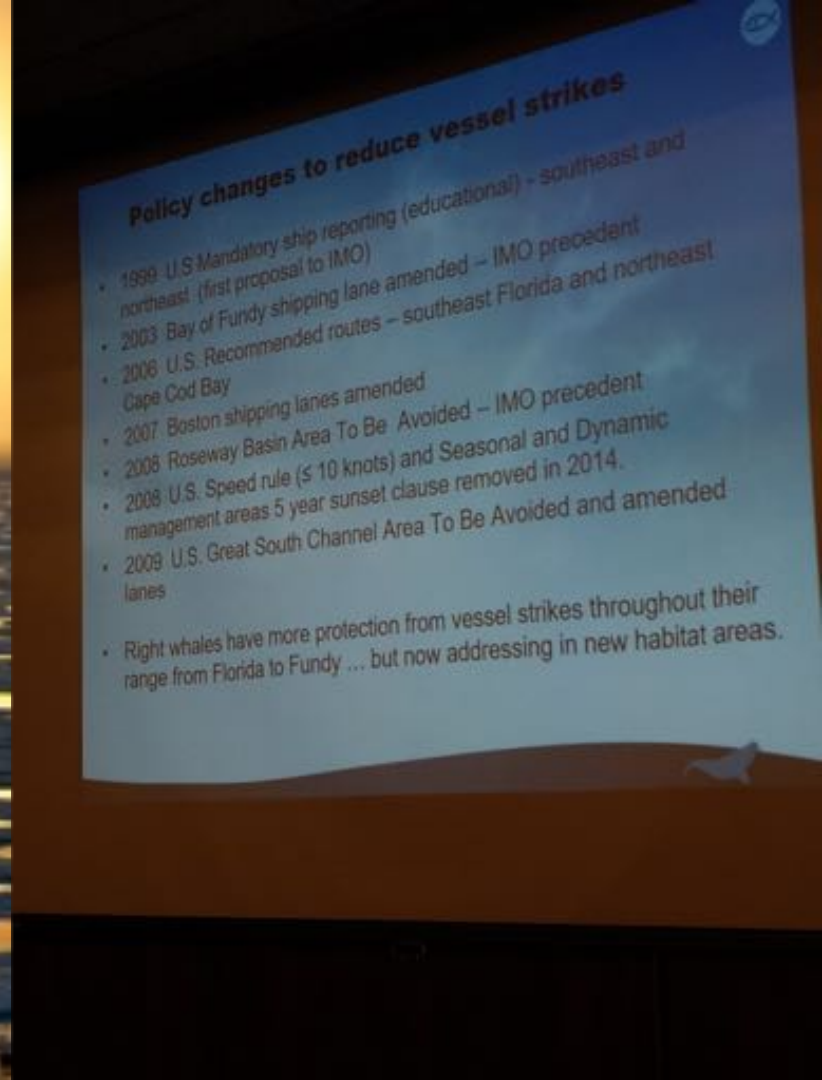
SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE
5th session
Agenda item 22

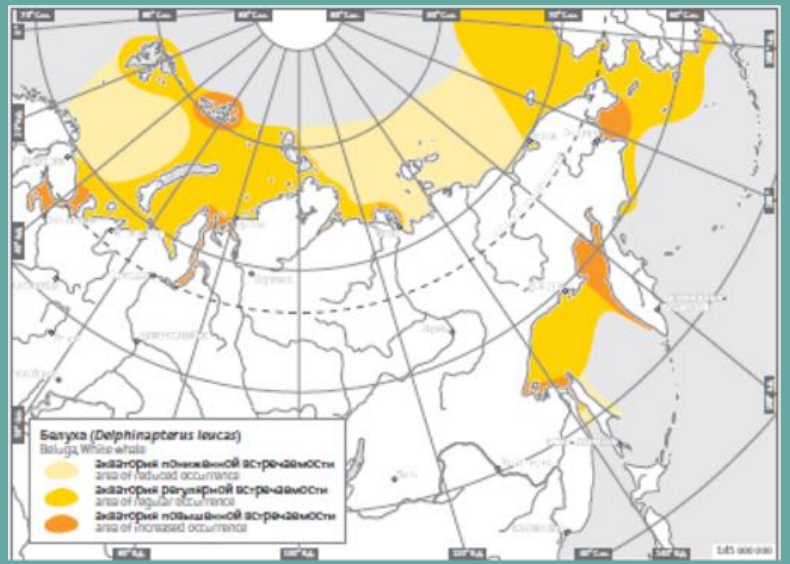
NCSR 5/22/8
15 December 2017
Original: ENGLISH

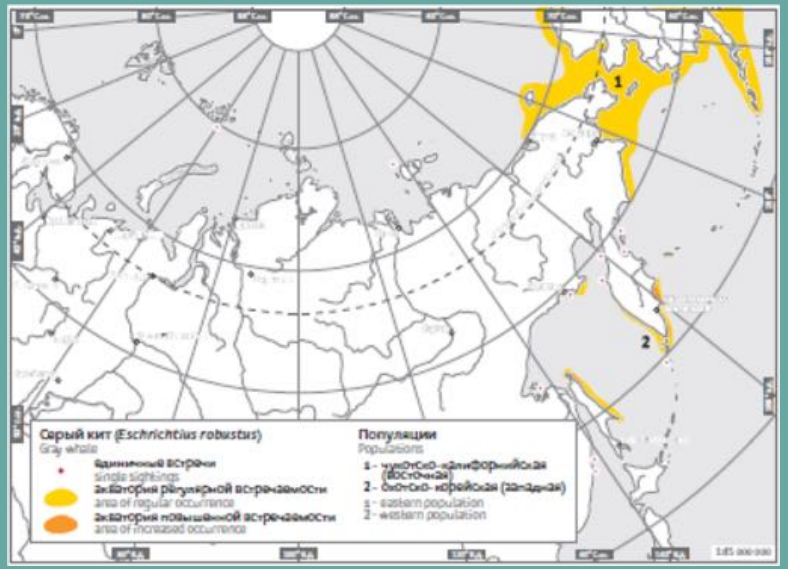
ANY OTHER BUSINESS

New information sources to support implementation of the Polar Code marine mammal avoidance provisions



Data Challenges





Climate Change

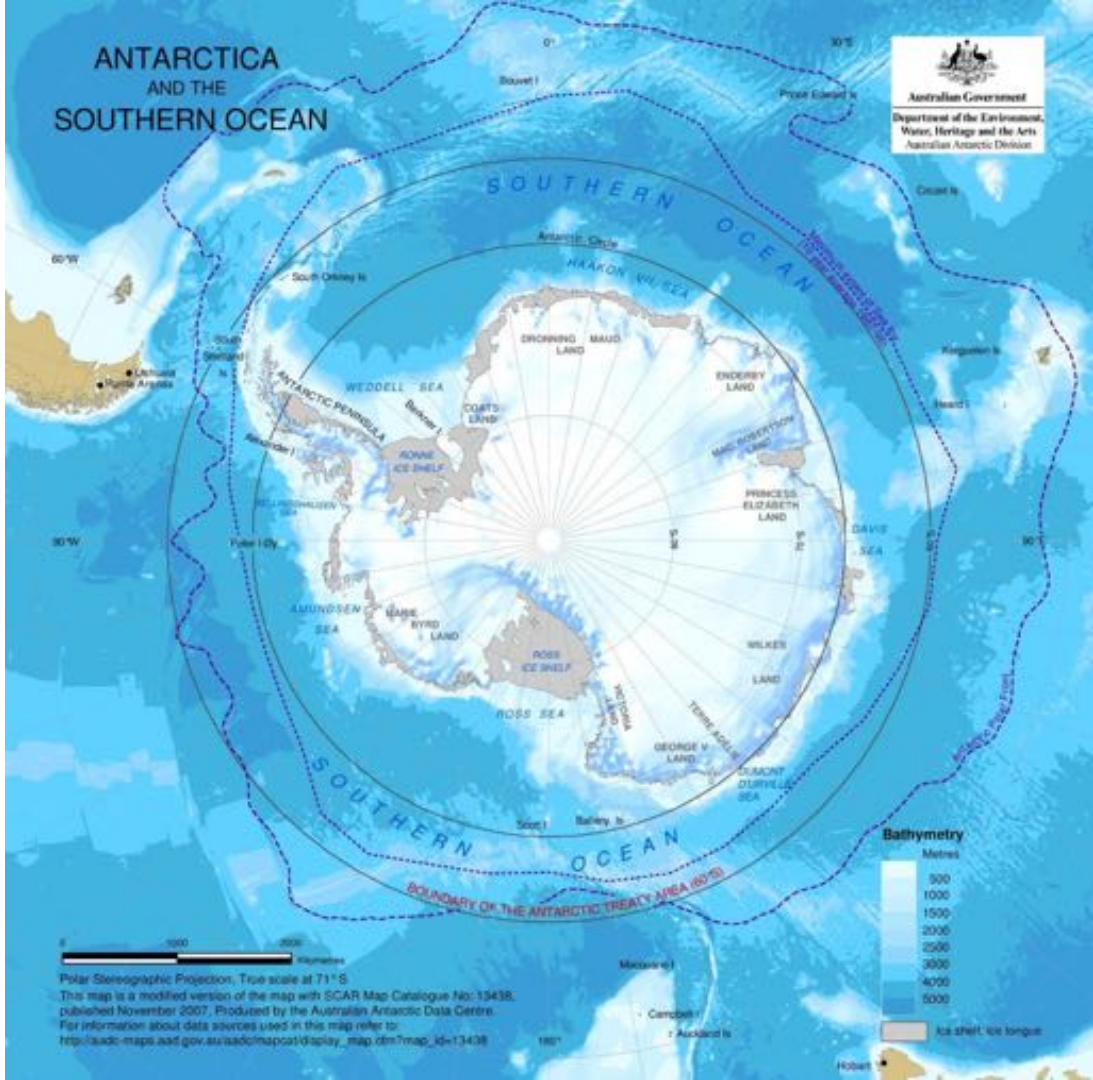
Planning in a Complex Environment

In addition to Marine Mammals:

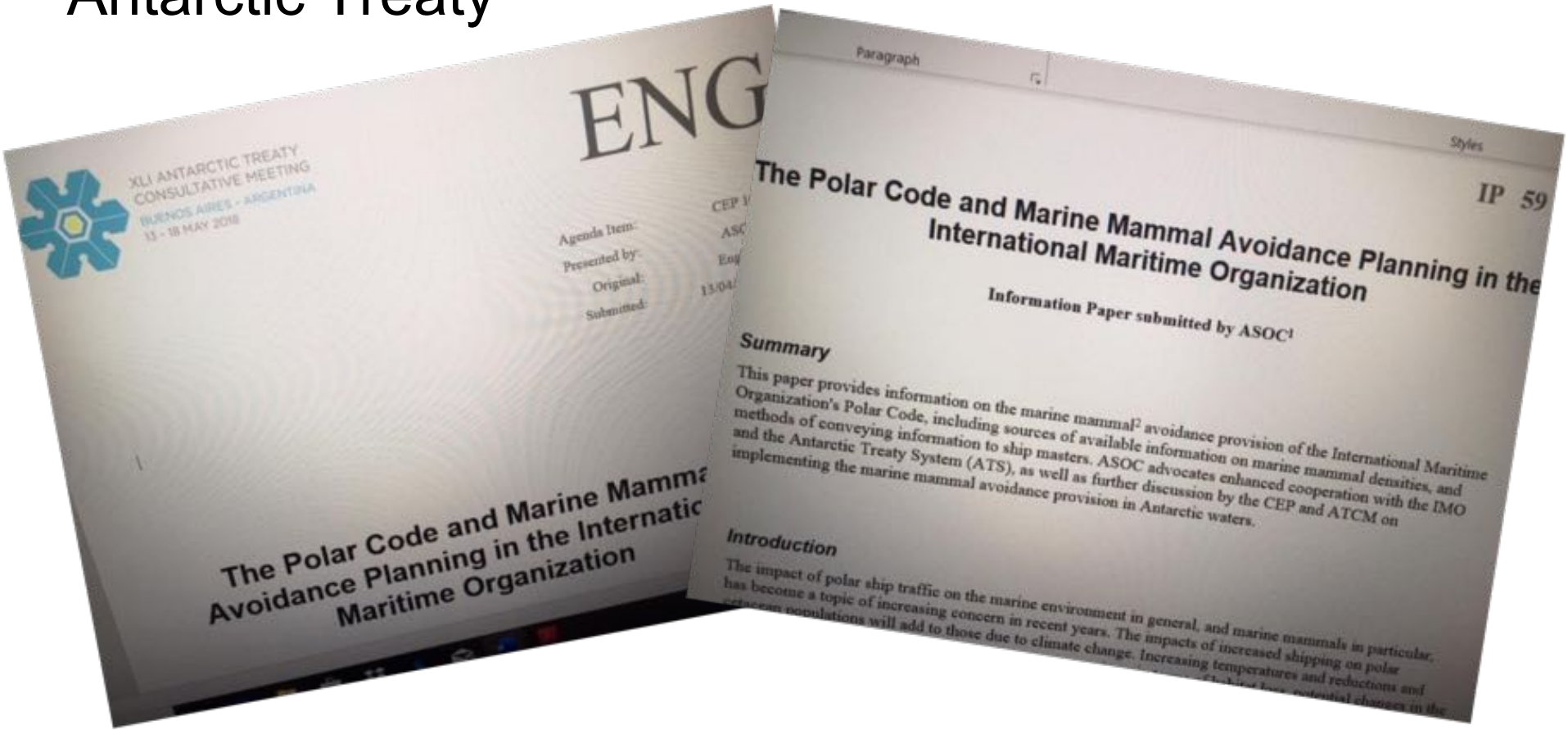
- 1 the procedures required by the PWOM;
- .2 any limitations of the hydrographic information and aids to navigation available;
- .3 current information on the extent and type of ice and icebergs in the vicinity of the intended route;
- .4 statistical information on ice and temperatures from former years;
- .5 places of refuge;
- .8 **national and international designated protected areas along the route**; and
- .9 operation in areas remote from search and rescue (SAR) capabilities.

Best practices in the Southern Ocean

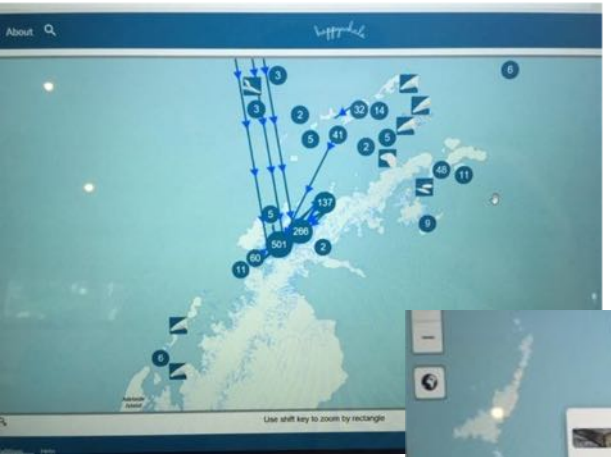
- Southern Ocean vessels
- Cruise ships
- Fishing vessels
- Resupply / research ships
- IAATO / CCAMLR / COMNAP
- Over 56,000 visitors last season / over 80,000 expected 2019/2020
- Exchange of experience and best practices

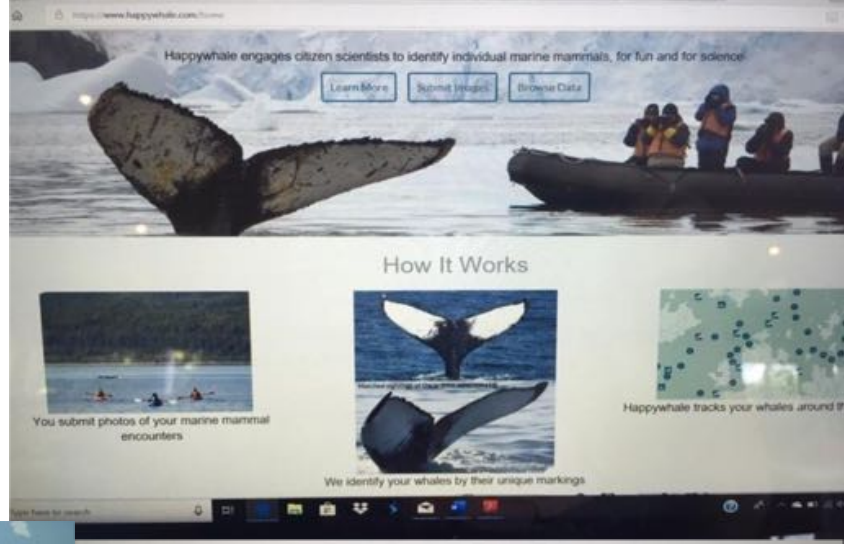


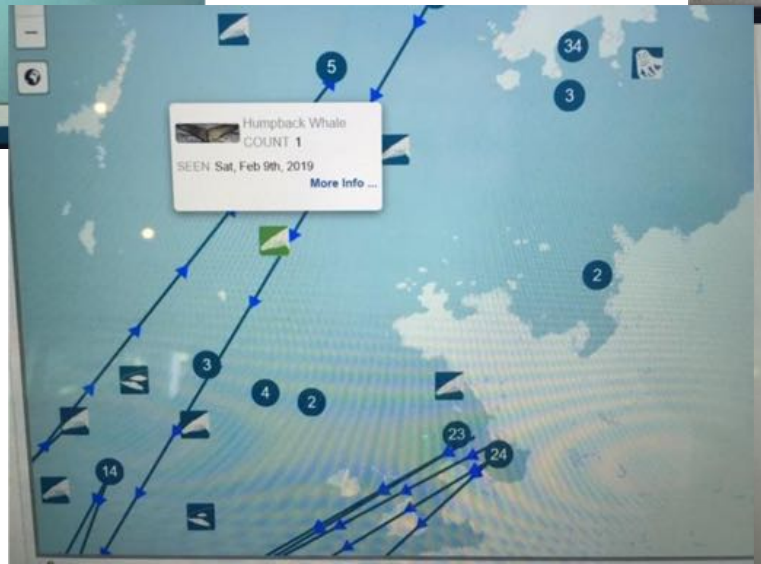
Antarctic Treaty

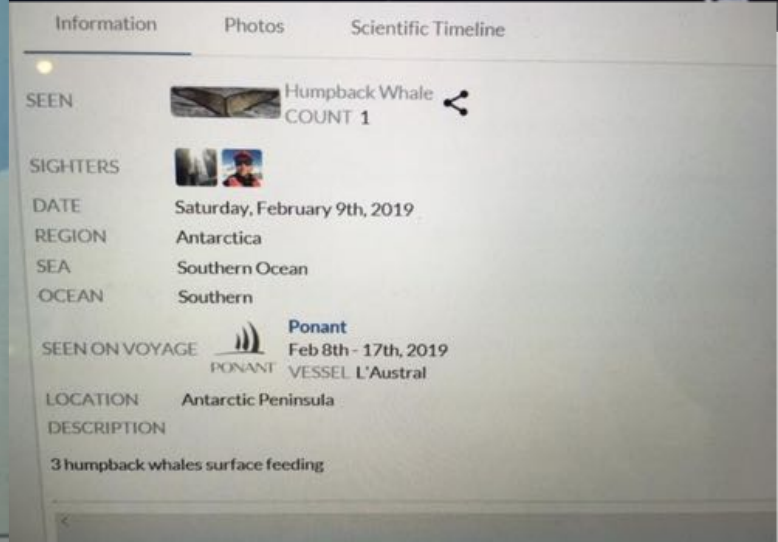


www.HappyWhale.com







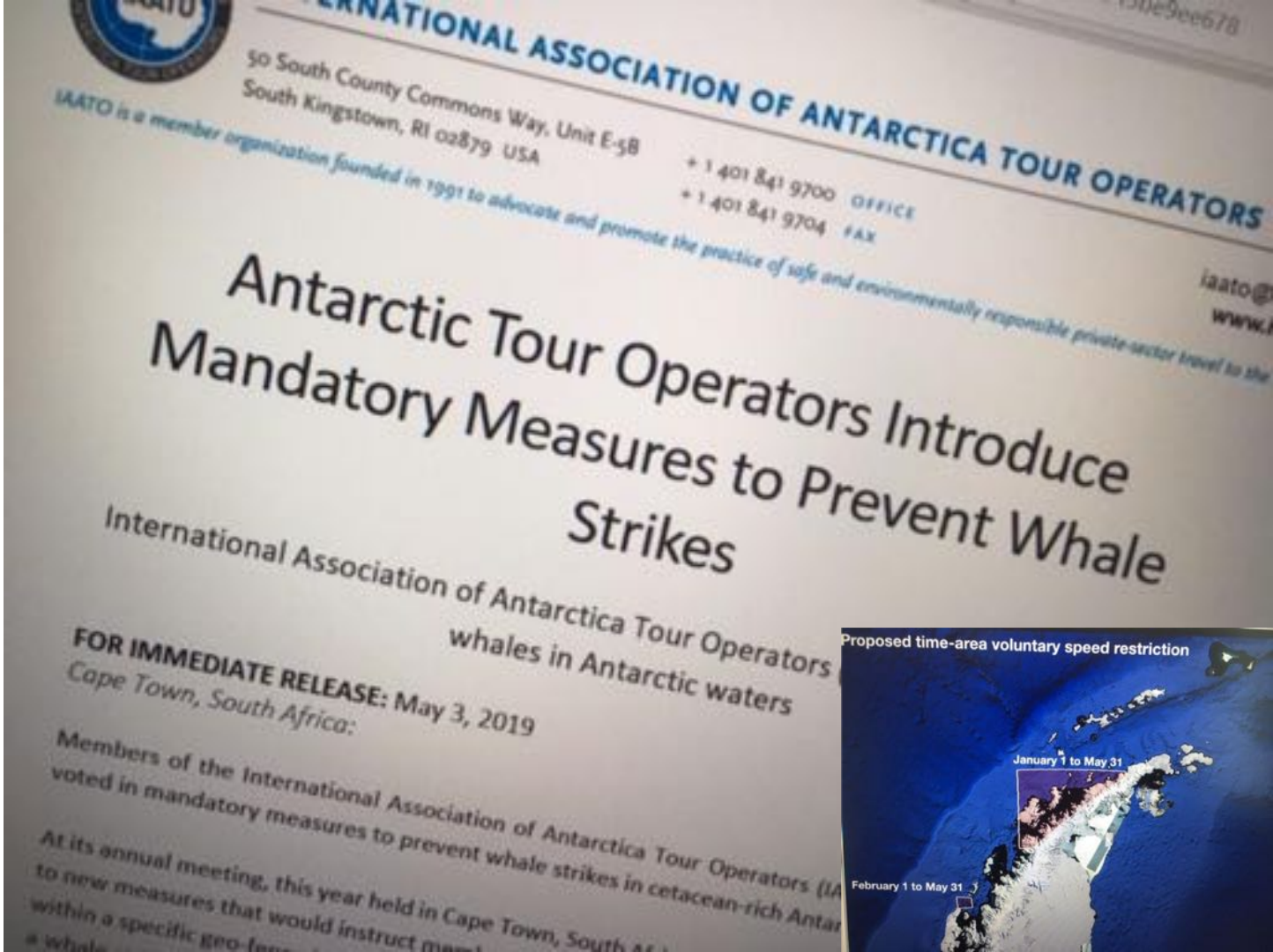


Best practice led by Antarctic Tour Operators:

- 10kn speed restriction

OR

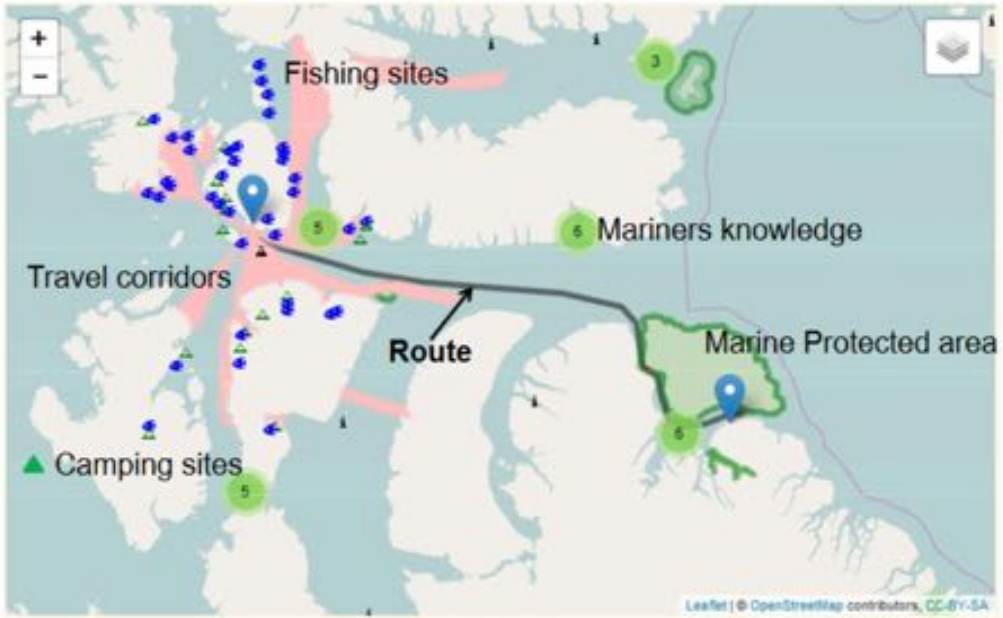
- Extra watchman on bridge to monitor and record



Next Steps for Marine Mammals

- Bridging Data Gaps
- Digital Integration of MM layers in navigation software

CASRAS application: Assessment of Shipping on Northern Local Activities – Route: Resolute to Pond Inlet



Next steps for voyage planning

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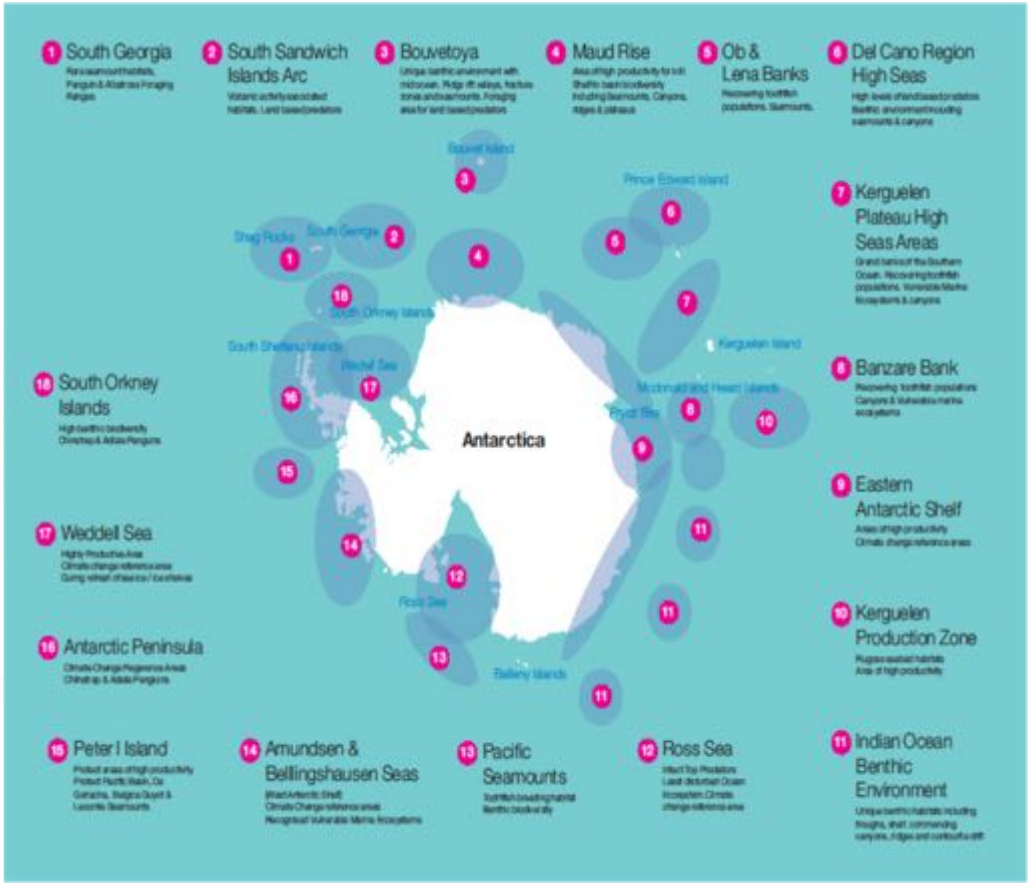


Thank you!