



Voyage Planning – challenges and gaps in the Polar Code

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Chapter 11 Voyage Planning



Goal: ...to ensure that the Company, master and crew are provided with sufficient information to enable operations to be conducted with due consideration to safety of ship and persons on board and, as appropriate, environmental protection.

Functional requirement: In order to achieve the goal....the voyage plan shall take into account the potential hazards of the intended voyage.



Voyage Planning: A Mandatory Requirement



Requirements: the master shall consider a route through polar waters, taking into account the following:

- **The procedures required by the PWOM**
- **Any limitations of the hydrographic information and aids to navigation available,**
- **Current information on the extent and type of ice and icebergs in the vicinity of the intended route,**
- **Statistical information on ice and temperatures from former years,**
- **Places of refuge,**
- **Current information on measures to be taken when marine mammals are encountered relation to known areas with densities of marine mammals including seasonal migration areas,**
- **Current information on relevant ships' routing systems, speed recommendations and vessel traffic services relating with densities of marine mammals, including season migration areas,**
- **National and international designated protected areas along the route, and**
- **Operating in areas remote from search and rescue capabilities**

Analysis of the Scope and Implementation of the Polar Code



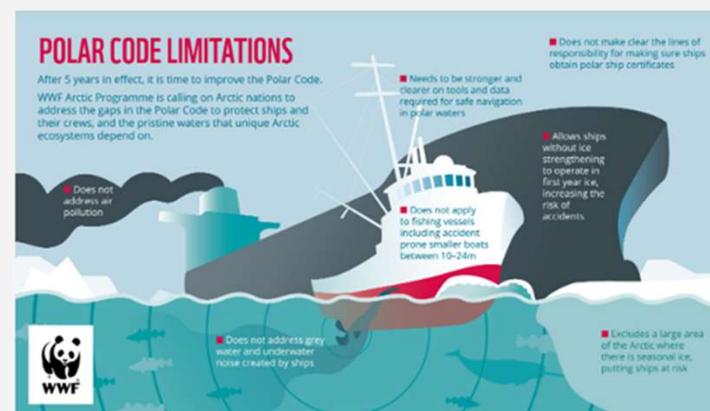
Sources of information, included

- New studies commissioned by WWF on the implementation of the Polar Code
- Information presented at Arctic Shipping Best Practice Information Forum (ASBPIF) meetings on the scope and implementation of the Polar Code
- Submissions to Antarctic Treaty Consultation Meetings on the scope of the Code and on certification of polar shipping
- An investigation into the grounding of the passenger vessel Akademik Ioffe by the Transportation Safety Board of Canada
- Initial outputs from Norwegian-led PAME project on interpretation of the Polar Code
- Feedback from ASBPIF participants

Addressing the gaps in the Polar Code

In 2021, WWF's Arctic Programme conducted a review to identify gaps and challenges in implementing the Polar Code. It revealed that the code does not go far enough in preventing accidents or pollution that could have catastrophic consequences for marine life in Arctic waters.

For instance, the code doesn't address some of the environmental risks posed by ships such as grey water discharge from sinks and showers, air pollution and underwater noise. In fact, there are no restrictions on the underwater noise produced by ships' propellers and on-board machinery. But this ship-generated noise often masks other sounds that are vital for Arctic marine mammals' communication and survival. As more ships arrive in the Arctic, noise levels are expected to increase, which could have devastating effects for Arctic species such as bowhead whales, belugas, narwhal, and walrus.



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WWF Findings: Challenges



Governance & Regulation:

- Interpreting the goal-based requirements of the Code
- Compliance and the role of recognised organisations versus flag states
- Lack of experience with operational assessments
- Validation of efficacy of POLARIS methodology
- Relationships between ship categories and ice class / ships operating in ice with no or little ice strengthening
- Provision of a PWOM / How to model a PWOM
- Operational assessment not captured in the PWOM
- Geographic application

Operational & Knowledge:

- More detailed inspections of vessels
- Mandatory carriage of additional navigation aids
- Use of navigational experts with local knowledge
- Areas not surveyed to modern hydrographic standards
- Obtaining mean daily low temperature data
- Co-ordinated itineraries scheduling
- Ice navigation courses
- Ships required to provide data on weather / ice conditions
- Voyage planning: collation of marine mammal data
- Voyage planning: MPA data

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WWF Findings: Gaps



- Non-SOLAS vessels are not covered by the Polar Code

In the Arctic non-SOLAS vessels make up around 1/3 of vessels and in the Antarctic over half of vessels

New outputs since the Polar Code adoption...

- guidelines for non-SOLAS vessels for fishing vessels over 24m in length and pleasure yachts over 300GT
- application of Polar Code Chapter 9 on navigation and Chapter 11 on voyage planning to non-SOLAS vessels (pending approval and adoption)

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- Use and carriage of HFO in Arctic
- Discharge of raw / untreated sewage beyond 12nm permitted
- Treatment and discharge of grey water
- Prevention of air pollution – BC, CO₂, SO_x, NO_x
- Spill preparedness and response
- Introduced / invasive species
- Underwater noise
- Routing measures e.g. areas to be avoided, deepwater routes

WWF Priorities



- Analysis has identified a long list of challenges and gaps including some potential improvements.
- Areas in need of further attention, include
 - **Voyage planning**
 - **Wider application of the Code (Cat C vessels, non-SOLAS vessels)**
 - **Discharges into polar environments**
- Polar Code - five years of use
- Arctic shipping is set to increase
- Every incident may be devastating
- Time to consider improvements needed
- ➔ Benefit from a proper and holistic review.



<https://www.arcticwwf.org/newsroom/reports/policy-brief-strengthening-the-polar-code/>

Action on Voyage Planning



- Guidance or a unified interpretation of Chapter 11 on polar voyage planning
- Strategy to raise awareness amongst stakeholders of challenges around voyage planning, particularly the environmental elements including those which affect Arctic Indigenous people
 - New elements such as marine mammals information, marine protected area information
 - How to access - daily temperature data, accurate & up to date ice data, hydrographic data (especially in previously inaccessible areas)
 - Routeing measures: id and designate routeing measures including areas to be avoided and blue corridors for marine mammals,
- Clarify relationship between voyage planning and the polar water operations manual
- Consideration and address questions raised: e.g. Should ships be required to provide data on weather and ice conditions? Should new hydrographic data be shared as waters open-up to shipping
- How to access relevant resources (e.g. via the Arctic Shipping Best Practice Information Forum)

WWF's work on voyage planning



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

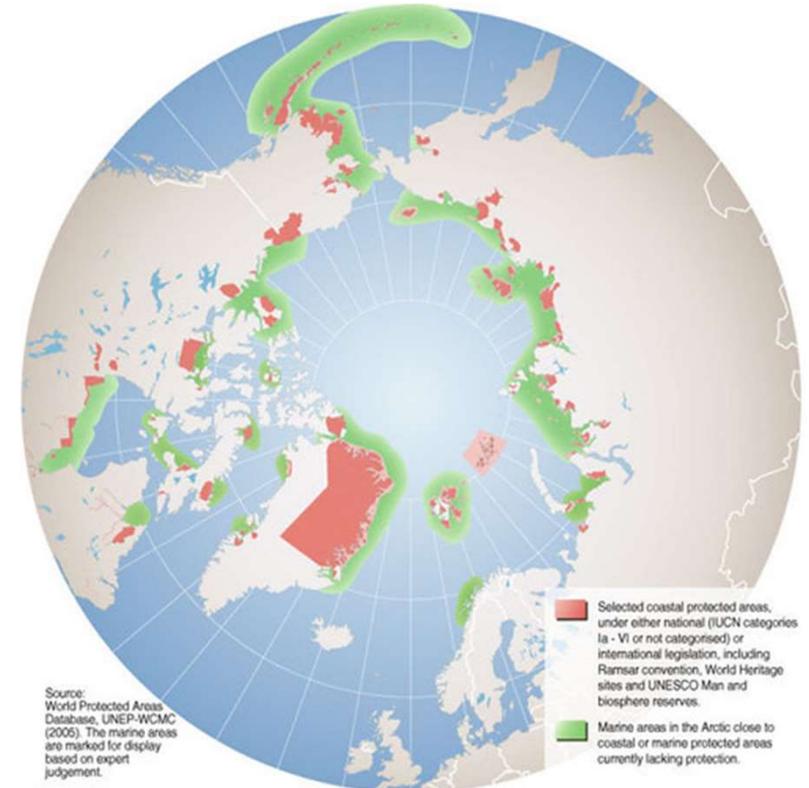
Recommendations



- Review areas of Polar Code where challenges and gaps have been identified leading to recommendations for action.

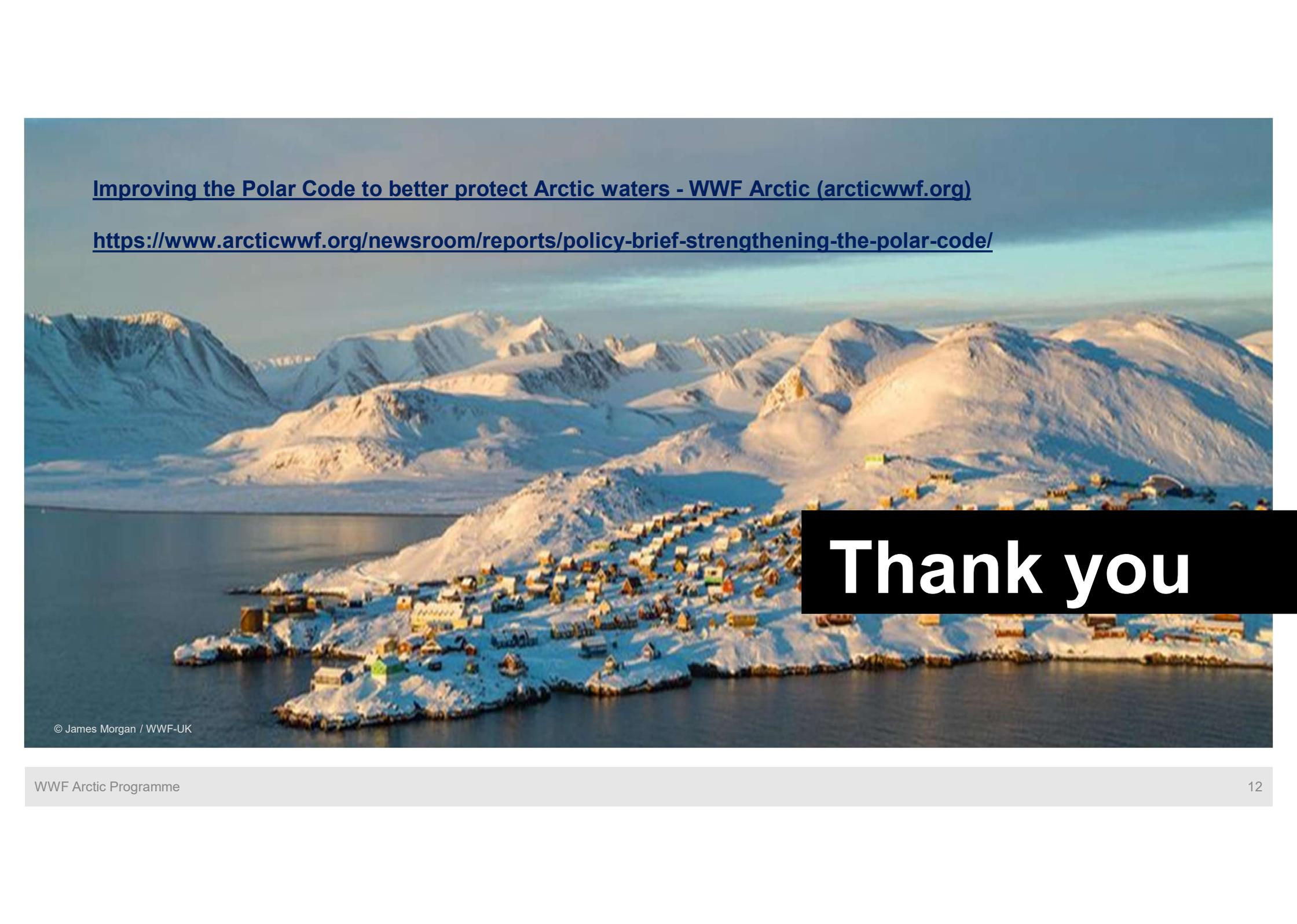
Specifically on voyage planning...

- Raise awareness of challenges and gaps with key stakeholders,
- Preparation of further guidance and a unified interpretation on polar voyage planning,
- Relationship between PWOM and voyage planning,
- Strategy for development of polar voyage planning, including access to information,
- Identification of routing measures to protect wildlife and Indigenous communities.



[Improving the Polar Code to better protect Arctic waters - WWF Arctic \(arcticwwf.org\)](https://www.arcticwwf.org)

<https://www.arcticwwf.org/newsroom/reports/policy-brief-strengthening-the-polar-code/>

An aerial photograph of a small, colorful town built on a snowy, rocky island in the Arctic. The houses are painted in various colors like yellow, red, and green. In the background, there are large, snow-covered mountains under a clear sky. The water of the fjord is visible in the foreground.

Thank you

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