FORUM WEB-PORTAL

Arctic Shipping Best Practice Information Forum 4th Annual Meeting - Virtual
24th & 25th November 2020

Michael Kingston, Special Advisor to PAME

www.arcticshippingforum.is
# Arctic Shipping Best Practice Information Forum

## Web Portal visits

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## Site - Visits

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## Polar Code Part IB

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Polar Code Chapters: Explanation and Submissions

- Polar Code Part IA - Safety Measures
- Polar Code Part IB
- Polar Code Part IIA: Pollution Prevention Measures
- Polar Code Part IIB

Contact

Contact Forum Organizers

IMO Information on the Polar Code

IMO Polar Code Information

Other Information

- Annual Forum Meetings
- Covid-19 Guidance
- Operational Documents
- Other Information

Submit Information to the Web-Portal

To submit information for the web-portal, click the link and fill in the form. The information will be reviewed and added to the web-portal consequently and the submitters contacted via email.

About the Forum

The International Maritime Organization's adoption of the International Code for Ships Operating in Polar Waters (Polar Code) prompted the Arctic Council's Working Group on the Protection of the Arctic Marine Environment (PAME) to establish the Arctic Shipping Best Practice Information Forum (Forum). The aim of the Forum is to raise awareness of the Polar Code amongst all those involved in or potentially affected by Arctic marine operations and to facilitate the exchange of information and best practices on Polar Code implementation among Forum participants.

Forum participation is open to Arctic States, Permanent Participants, and Arctic Council Observer as well as any widely-recognized professional organization dedicated to improving safe and environmentally sound marine operations in the Arctic as demonstrated by expertise and experience in Arctic shipping and/or related issues.

The principal product of the Forum is a web portal which provides links to authoritative information that are indispensable to the effective implementation of and compliance with the Polar Code. Organized by the chapters of the Polar Code, the web portal links to information submitted by Forum participants and vetted according to agreed criteria by the Forum’s Steering Committee. In addition, the web portal contains links to information provided by administrations of the eight Arctic States (Canada, Kingdom of Denmark, Iceland, Norway, Russian Federation, Sweden and the United States of America) and the PAME Secretariat.

PAME Protection of the Arctic Marine Environment
CHAPTER 1 - GENERAL: Full Polar Code text

POLAR CODE CHAPTERS: EXPLANATION AND SUBMISSIONS

- Part IA - Safety Measures
- Polar Code Part IB
- Polar Code Part IIA: Pollution Prevention Measures
- Polar Code Part II B

ARCTIC STATE INFORMATION
Arctic State information site.

FORUM PARTICIPANTS
This site overviews participants of the Forum.

WEB PORTAL HOME
Forum home page.
Importance of working hard intersessionally with Participants

FORUM: PARTICIPANTS

This page lists Participants of the Arctic Shipping Best Practice Information Forum. According to the Forum’s Terms of Reference, the “Arctic States intend Forum participation to be open to Arctic States, Permanent Participants and Arctic Council Observers as well as any widely-recognized professional organizations dedicated to improving safe and environmentally sound marine operations in the Arctic as demonstrated by expertise and experience in Arctic shipping and/or related issues…”

To apply for participant status, please contact PAME (pame@pame.is).

<table>
<thead>
<tr>
<th>PARTICIPANTS</th>
<th>Please click the boxes for information on each participant</th>
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<tbody>
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<td>Alaska Maritime Prevention &amp; Response Network (Alaska Network)</td>
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<td>American Bureau of Shipping (ABS)</td>
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<td>Arctic Coast Guard Forum (ACGF)</td>
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2019

OCIMF

International Chamber of Shipping

Shaping the Future of Shipping

Participant

- OCIMF
- ICS
PART I-B:

CHAPTER SUMMARY
There is important additional guidance to Chapters 1, 2, 3, 6, 8, 9, 10 and 11. There is also detailed additional guidance for important definitions under the Polar Code such as the Mean Daily High Temperature, the Mean Daily Average Temperature, and the Mean Daily Low Temperature. For the full text of Part I-B Additional Guidance, see below.

SUBMISSIONS

- Bering Sea Elders Group
- International Chamber of Shipping (ICS)
- Oil Companies International Marine Forum (OCIMF)
- International Maritime Organization (IMO)
- National Geospatial-Intelligence Agency
- World Meteorological Institute
### PART I-B: ADDITIONAL GUIDANCE REGARDING THE PROVISIONS OF THE INRODUCTION AND PART I-A: Full Polar Code text

As adopted from IMO - Full Polar Code text

| Additional Guidance to Section 2 (Definitions of the Introduction) |
|貸                                                 |
| Additional Guidance to Chapter 1 (General)        |
| Additional Guidance to Chapter 2 (Polar Water Operation Manual (PWOM)) |
| Additional Guidance to Chapter 3 (Ship Structure) |
| Additional Guidance to Chapter 8 (Life-Saving Appliances and Arrangements) |
| Additional Guidance to Chapter 9 (Safety of Navigation) |
| Additional Guidance to Chapter 10 (Communication)  |
| Additional Guidance to Chapter 11 (Voyage Planning) |

### POLAR CODE CHAPTERS: EXPLANATION AND SUBMISSIONS

<table>
<thead>
<tr>
<th>Part IA - Safety Measures</th>
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<tr>
<td>Section</td>
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<tr>
<td>Chapter 1 (General)</td>
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<tr>
<td>Chapter 2 (Polar Water Operation Manual (PWOM))</td>
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- **3.1** Recommendation on the content of the Polar Water Operational Manual The Polar Water Operational Manual (PWOM) is intended to address all aspects of operations addressed by chapter 2 of part I-A. When appropriate information, procedures or plans exist elsewhere in a ship's documentation, the PWOM itself does not need to replicate this material, but may instead cross-reference the relevant reference document. A model Table of Contents is found in appendix 2. The model follows the general structure of chapter 2. Not every section outlined below will be applicable to every polar ship. Many category C ships that undertake occasional or limit polar voyages will not need to have procedures for situations with a very low probability of occurrence. However, it may still be advisable to retain a common structure for the PWOM as a reminder that if assumptions change then the contents of the manual may also need to be updated. **Noting an aspect as "not applicable" also indicates to the Administration that this aspect has been considered and not merely omitted.**

- **3.2** Guidance on navigation with icebreaker assistance With respect to navigation with icebreaker assistance, the following should be considered:
CHAPTER SUMMARY

There is important additional guidance to Chapters 1, 2, 3, 6, 8, 9, 10 and 11. There is also detailed additional guidance for important definitions under the Polar Code such as the Mean Daily High Temperature, the Mean Daily Average Temperature, and the Mean Daily Low Temperature. For the full text of Part I B Additional Guidance, see below.

SUBMISSIONS

Bering Sea Elders Group

International Chamber of Shipping (ICS)

**Hyperlink: Guidelines for the Development of a Polar Water Operational Manual**

The International Chamber for Shipping (ICS) and the Oil Companies International Marine Forum (OCIMF) jointly published this document in 2019. ICS and OCIMF members consider that how a ship is operated in Polar waters, and especially in ice, is a critical aspect for safe operations. The quality of the PWOM will have an impact on achieving safe operations. This document supplements the Polar Code and its Appendix II, which provides a model for a PWOM. The document states that while Appendix II is a useful starting point, ICS and OCIMF members have found that additional information is needed to develop a quality PWOM.
Oil Companies International Marine Forum (OCIMF) and the International Chamber for Shipping (ICS) and the jointly published this document in 2019. ICS and OCIMF members consider that how a ship is operated in Polar waters, and especially in ice, is a critical aspect for safe operations. The quality of the PWOM will have an impact on achieving safe operations. This document suplements the Polar Code and its Appendix II, which provides a model for a PWOM. The document states that while Appendix II is a useful starting point, ICS and OCIMF members have found that additional information is needed to develop a quality PWOM.

Hyperlink 2: Northern Sea Route – Best practices and Challenges (2017)
For Part IB, see pages 1 and 12.

Hyperlink 3: Offshore Vessel Operations In Ice and or Severe Sub Zero Temperatures in Artic and Sub Artic regions (2014).

In addition:
- We have also published a book through Witherby Seamanship: The use of large tankers in Seasonal First Year Ice and Severe sub-Zero conditions (2010), however this has to be purchased this can be purchased for £125 at https://www.witherbyseamanship.com/large-tanker-sub-zero-ice.html
- Other information papers from OCIMF: https://www.ocimf.org/publications/information-papers.aspx#sectionBreadcumb

International Maritime Organization (IMO)
National Geospatial-Intelligence Agency
World Meteorological Institute

• OCIMF
CHAPTER 2:

Polar Water Operational Manual

Chapter 2 describes the content to be included in the Polar Water Operational Manual (PWOM), a mandatory ship-specific document designed to support decision making through the identification of procedures for operations under routine and emergency conditions. The PWOM must contain references to methodologies used to determine capabilities and limitations of a vessel in ice. The Regulations require that vessels develop and carry a PWOM on board, and require that a variety of risk-based procedures are taken into consideration. These are set out in the text of Chapter 2 below, and in Part 1B Additional Guidance.

SUBMISSIONS

- American Bureau of Shipping (ABS)
- DNV GL
- International Chamber of Shipping (ICS)
- International Ice Charting Working Group
- Lloyd's Register (LR)
- Oil Companies International Marine Forum (OCIMF)
- World Meteorological Organization
- The Environment Agency of Iceland
CHAPTER 11:

VOYAGE PLANNING

CHAPTER SUMMARY

This chapter is designed to ensure that the company, master, and crew are provided with sufficient information to enable operations to be conducted with due consideration to the safety of ships and persons on board and, as appropriate, environmental protection. These considerations need to be referenced in the Polar Waters Operational Manual. By way of example, they include but are not limited to Notices to Mariners that are ordinarily contained in government publications. These are set out in the text of Chapter 11 below, and in the Part 18 Additional Guidance.

SUBMISSIONS

- International Chamber of Shipping (ICS)
- Oil Companies International Marine Forum

Voyage Planning
Part IA
Chapter 11
CHAPTER 8:

LIFE SAVING APPLIANCES AND ARRANGEMENTS

CHAPTER SUMMARY

Chapter 8 contains requirements that provide for safe escape, evacuation, and survival under various operating conditions. Provisions contained in this chapter of the Polar Code will apply to new and existing vessels if such vessels may encounter the conditions the provisions are intended to address. Requirements for partially or totally enclosed lifeboats are stricter in the Polar Code than in the otherwise applicable SOLAS requirements. This includes having specific means in place to assist with escape or evacuation in ice and snow conditions, and provision for personal survival equipment that provide sufficient frostbite protection. These are set out in the text of Chapter 8 below, and in the Part 1B Additional Guidance.

SUBMISSIONS

- American Bureau of Shipping (ABS)
- DNV GL
- International Maritime Organization (IMO)
- Lloyd’s Register (LR)
- Maritime Department, Norwegian Ministry of Trade, Industry and Fisheries
- Oil Companies International Marine Forum (OCIMF)
- World Meteorological Organization
Interim guidelines on life-saving appliances and arrangements for ships operating in polar waters.

- Note IMO Circular 26 June 2019 (MSC.1/Circ.1614)

Hyperlink: IMO in the polar environment: Search and Rescue
The following video which is part of a series on IMO in the polar environment, focuses on search and rescue in polar region the challenges of search and rescue operations in these inhospitable polar regions.
PART I-B: ADDITIONAL GUIDANCE REGARDING THE PROVISIONS OF THE INTRODUCTION AND PART I-A: Full Polar Code text

As adapted from IMO - Full Polar Code text
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<td>International Ice Patrol</td>
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Hypertext: https://www.imo.org/en/MediaCentre/HotTopics/Pages/Polar-default.aspx
IMO’s website contains information regarding voyage planning.

Additionally, IMO’s Maritime Safety Committee (MSC) in May 2018, adopted new and amended ships’ routing measures in the Bering Sea and Bering Strait, aimed at reducing the risks of incidents – the first measures adopted by IMO for the Arctic region where the Polar Code applies.

The measures include six two-way routes and six precautionary areas, to be voluntary for or all ships of 400 gross tonnage and above, in the Bering Sea and Bering Strait off the coast of the Chukotskiy Peninsula and Alaska, proposed by the Russian Federation and the United States. These waters are expected to see increased traffic due to rising economic activity in the Arctic.

In addition, the MSC established three areas to be avoided in the Bering Sea, proposed by the United States, to improve safety of navigation and protect the fragile and unique environment. These measures entered into force on 1 December 2018.

Marine Affairs Program, Dalhousie University
National Geospatial-Intelligence Agency
National Oceanic and Atmospheric Administration (NOAA)
Participant

• IMO

Manning & Training

Part IA

Chapter 12
PART IB:
ADDITIONAL GUIDANCE REGARDING THE PROVISIONS OF THE INTRODUCTION AND PART I-A

CHAPTER SUMMARY
There is important additional guidance to Chapters 1, 2, 3, 4, 5, 6, 7, 8, 10 and 11. There is also detailed additional guidance for important definitions under the Polar Code such as the Mean Daily High Temperature, the Mean Daily Average Temperature, and the Mean Daily Low Temperature. For the full text of Part I B Additional Guidance, see below.

SUBMISSIONS

- Bering Sea Elders Group
- Oil Companies International Marine Forum (OK.IMF)
- International Maritime Organisation (IMO)

Guidance on Surveys:
- Note IMO Circular 16 December 2016 (MSC.1/Circ.1562)

Guidance on methodologies for assessing operational capabilities and limitations in ice
- Note IMO Circular 6 June 2016 (MSC.1/Circ.1519)
- Interim guidelines on life-saving appliances and arrangements for ships operating in polar waters.
- Note IMO Circular 26 June 2019 (MSC.1/Circ.1614)

- National Geospatial-Intelligence Agency
- World Meteorological Institute

Participant

- IMO

Additional Guidance

Part IB
CHAPTER SUMMARY

This chapter is designed to ensure that the company, master, and crew are provided with sufficient information to enable operations to be conducted with due consideration to the safety of ships and persons on board and, as appropriate, environmental protection. These considerations need to be referenced in the Polar Waters Operational Manual. By way of example, they include but are not limited to Notices to Mariners that are ordinarily contained in government publications. These are set out in the text of Chapter 11 below, and in the Part 18 Additional Guidance.

SUBMISSIONS

Bering Sea Elders Group

Hyperlink: http://eloka-arctic.org/

The link submitted is the electronic version of "The Northern Bering Sea: Our Way of Life", published by the Bering Sea Elders Group an alliance of thirty-nine Yup’ik and Inupiaq villages that seeks to protect the sensitive ecosystem of the Bering Sea, the subsistence lifestyle, and the sustainable communities that depend on it. The Northern Bering Sea: Our Way of Life highlights large hunting and fishing areas, and the ecological importance of the region.

The maps and information contained in the submission provide valuable information on locations and timing of marine mammal concentrations and marine mammal migratory routes. Information is also provided on locations and timing of subsistence hunting of marine mammals, an important cultural practice for the region.
Chapter 11 of the Polar Code calls for voyage planning that results in the least amount of impact on marine mammals in the Arctic. The Hudson Strait Mariner’s Guide is designed to assist with this provision. The Guide is made up of two large posters to be hung on the ship’s bridge: a chart that will help mariners identify whales, seals, polar bears and walrus, and maps of marine mammal habitat in both summer and winter. The guide lists phone numbers so mariners can report sightings and incidents at both the national and community level, and provides operational guidance when close to or encountering marine mammals.

Chapter 11 of the Polar Code requires mariners to plan voyages which result in the least amount of harm to marine life. WWF Arctic Oceans map depicts areas of high value to local communities and makes recommendations on use and protection for the region.

The Eastern Arctic Mariner’s Guide is made up of three large posters to be hung on a ship’s bridge, consisting of:
- Visual identification chart that will help mariners recognize whales, seals, polar bears and walruses.
- Maps of critical habitat, migration routes and calving areas.
- Maps indicating designated conservation areas and ice, including community on-ice travel routes and caribou sea-ice crossings.
- Recommends courses of action regarding sensitive whale habitats, walrus habitat, caribou sea-ice crossings, shipping in polynyas and around floe edges, ice-breaking and Inuit travel routes as well as a tourism exclusion zone and travel speed.
- Lists phone numbers so mariners can report sightings and incidents at both the national and community level, and provides operational guidance when close to or encountering marine mammals.
International Code for Ships Operating in Polar Waters (Polar Code)

Further information:
- Buy the Polar Code
- IMO as observer to the Arctic Council
- PAME - WebPortal
- More on the Polar Code

IMO Website link to Forum Web Portal
WMO support for Shipping in Polar Waters

Climate change and accelerating sea-ice melt in polar regions are opening up new polar shipping routes and increasing summer availability to traditionally ice-locked areas. Due to challenges of weather, communications and positioning (e.g. poor satellite coverage), the Arctic may become one of the highest risk areas in the world for safety of life and property at sea. Reliable marine weather forecasts and knowledge of state of the sea and sea-ice are crucial for safe navigation and planning voyages in both Arctic and Antarctic waters. Specialist skills in ice navigation are also needed to support safe passage of ships in polar waters. In cooperation with the International Maritime Organization (IMO), WMO supports the UN International Convention for Safety of Life At Sea (SOLAS) through the provision of maritime safety information, including in polar waters. In order to improve such services WMO is promoting the collection of cryosphere and weather observations from ships sailing in polar regions. This is guided by the IMO Polar Code.

WMO contribution to Arctic Shipping Best Practice Portal
# Arctic State Information

This page contains information that each Arctic State and its relevant government agencies consider important for vessel owners, vessel operators, flag states, port states, and other interested stakeholders to consider when applying Polar Code requirements.

The information is non-exhaustive and all stakeholders are advised to contact relevant government agencies for specific advice.

## Arctic States

- Canada
- Kingdom of Denmark
- Iceland
- Finland
- Norway
- Sweden
- Russian Federation
- United States of America

## Non-Arctic States

### United Kingdom:

The UK Maritime and Coastguard Agency (MCA) issued a marine guidance note *(MGN 632 (M+F)) providing updated guidance and clarification for aspects of MARPOL Annex V, polar code and merchant shipping (prevention of pollution by garbage from ships) regulations 2020.*

FORUM: PARTICIPANTS

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To apply for participant status, please contact PAME (pame@pame.is).

PARTICIPANTS

Please click the boxes for information on each participant

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CHAPTER 10:

COMMUNICATION

CHAPTER SUMMARY

Chapter 10 provides for effective communications for ships and survival craft during normal and emergency situations, including explicit requirements for search and rescue (SAR) and telemedical assistance communications. Communication equipment on board shall have the capabilities for ship-to-ship and ship-to-shore communication, taking into account the limitations of communications systems in high latitudes and the anticipated low temperatures. There must also be specific sound signaling equipment for use when under escort. Low-temperature capability of communication equipment must be demonstrated by both ships and survival crafts. In respect of survival craft, equipment must be operable for the maximum expected time of rescue. These are set out in the text of Chapter 10 below, and in the Part 1B Additional Guidance.

SUBMISSIONS

- American Bureau of Shipping (ABS)
- DNV GL
- International Ice Charting Working Group
- Lloyd’s Register (LR)
- Oil Companies International Marine Forum (OCIMF)
- World Meteorological Organization Technical Commission on Oceanography and Marine Meteorology (JCOMM)
Thank You

Michael Kingston, Special Advisor to PAME

On behalf of the PAME Arctic Shipping Best Practice Information Forum Organizing Committee

www.arcticshippingforum.is