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The Polar Code and so what?

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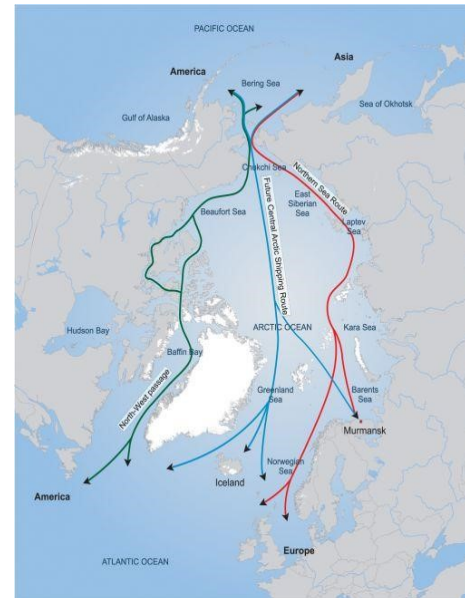
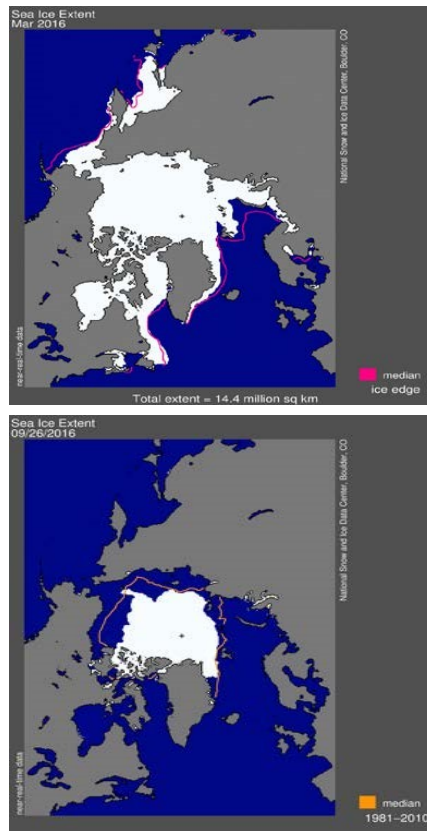
Overview

Regulating Arctic Shipping:
From guidelines to
hard law

The relationship with
UN Convention on
the Law of the Sea

Remaining issues

Conclusions



IMO and the Arctic

Existing rules and standards

IMO conventions:

- SOLAS 74, MARPOL 73/78, STCW, Ballast Water Convention (not in force)

Guidelines:

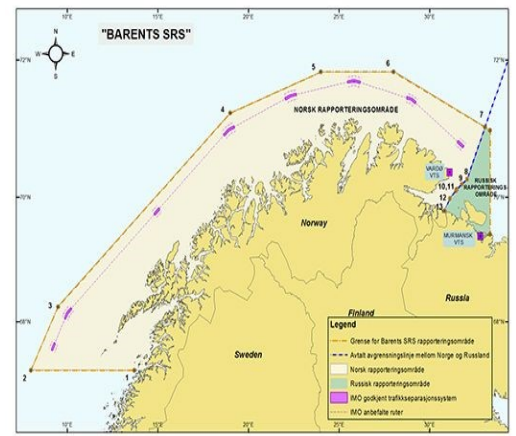
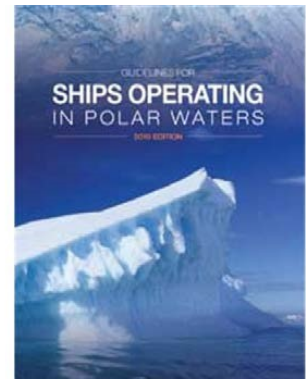
- 2002 Guidelines for Ships operating in Arctic Ice-covered Waters
- 2010 Guidelines for Ships operating in Polar waters

Other guidelines:

- Guide to cold water survival
- Guidance for passenger ships operating in remote areas
- Guidelines on voyage planning for passenger ships operating in remote areas

Routeing measures (SOLAS chapter V):

- 2012 Barents Sea Ship Reporting System



Developing the Polar Code

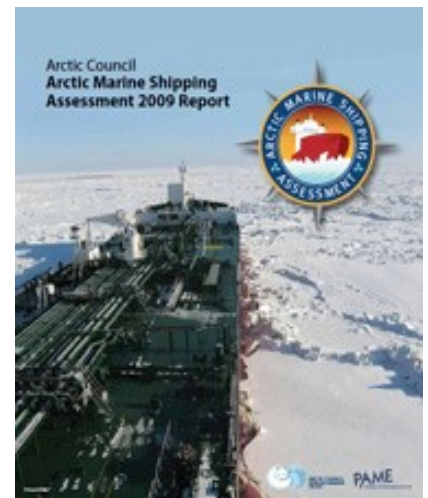
The adequacy of existing rules and standards

2009: Arctic Marine Shipping Assessment (AMSA)

2010-2014: From hazard matrix to negotiating text to a draft Polar Code

2014-2015: Consideration and adoption by the two relevant committees (MSC and MEPC)

1 January 2017: Entry into force



International Code for Ships operating in Polar Waters

Preamble

Introduction

Part I-A Safety Measures

- General
- Polar Water Operational Manual
- Ship structure
- Stability and subdivision
- Watertight and weathertight integrity
- Machinery installations
- Fire safety/protection
- Life-saving appliances and arrangements

- Safety of navigation
- Communication
- Voyage planning
- Crewing/manning/training

Part I-B Additional guidance

Part II-A Pollution Prevention measures

- Prevention of oil pollution
- Prevention of pollution from noxious liquid substances
- Prevention of pollution by sewage from ships
- Pollution by garbage

Part II- B Additional guidance

Appendix: Polar Ship Certificate

Polar Code

Legal status and application

Legal status:

Legally binding through amendments of:

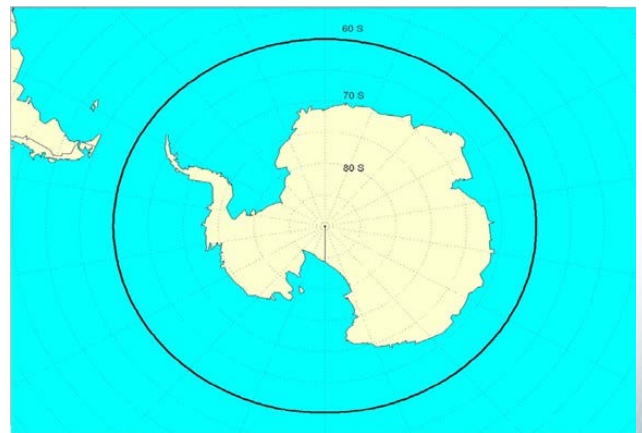
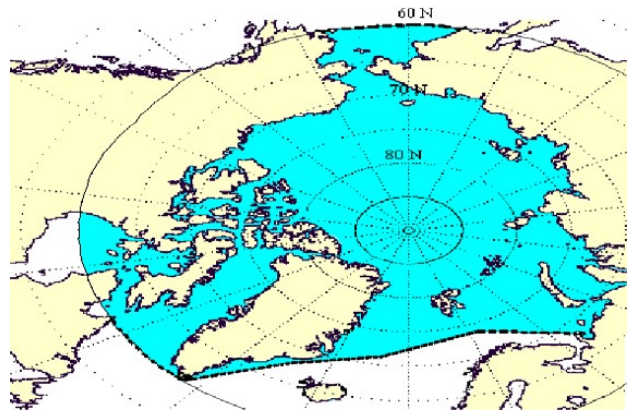
- SOLAS 74 (new chapter XIV)
- MARPOL 73/78 annexes
- STCW (chapter V)

Polar waters:

- Arctic waters,
- Antarctic Area

"Ships operating in polar waters":

- International and domestic voyages?
- Not governmental owned/operated vessels
- Not smaller vessels (e.g. leisure and fishing vessels)



Polar Code

Normative design

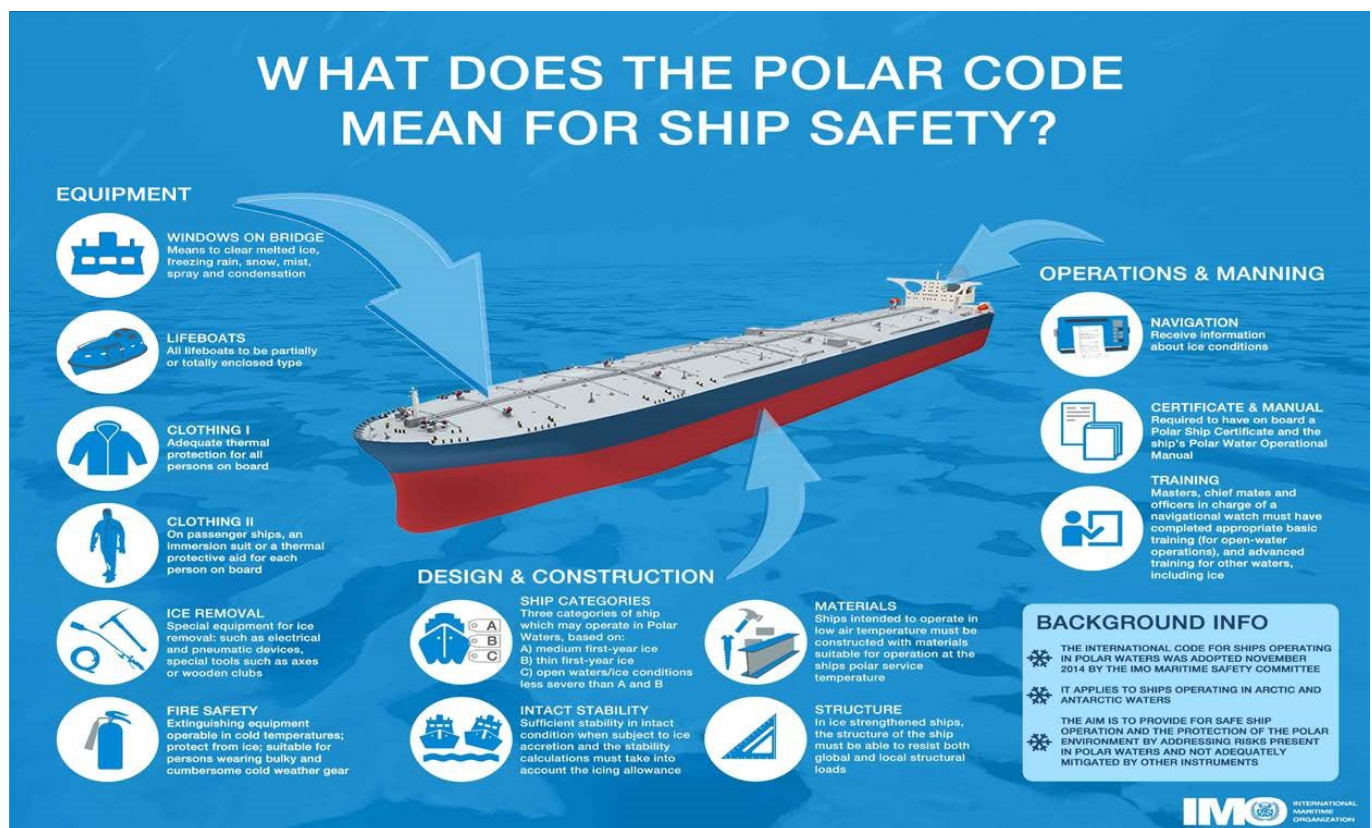
- Risk-based approach:
 - Design of the Polar Code
 - Operational limitations
- Goal-based approach (Part I-A):
 - Goals, functional requirements and prescriptive rules (Polar Code Part I-A/1.1)
 - Alternative design and arrangement (SOLAS regulation XIV/4)
- Prescriptive approach (Part II-A)
 - «In Arctic waters any discharge into the sea [...] shall be prohibited», (Part II-A/1.1.1)

3 Sources of hazards

3.1 The Polar Code considers hazards which may lead to elevated levels of risk due to increased probability of occurrence, more severe consequences, or both:

- .1 ice, as it may affect hull structure, stability characteristics, machinery systems, navigation, the outdoor working environment, maintenance and emergency preparedness tasks and malfunction of safety equipment and systems;
- .2 experiencing topside icing, with potential reduction of stability and equipment functionality;
- .3 low temperature, as it affects the working environment and human performance, maintenance and emergency preparedness tasks, material properties and equipment efficiency, survival time and performance of safety equipment and systems;
- .4 extended periods of darkness or daylight as it may affect navigation and human performance;
- .5 high latitude, as it affects navigation systems, communication systems and the quality of ice imagery information;
- .6 remoteness and possible lack of accurate and complete hydrographic data and information, reduced availability of navigational aids and seamarks with increased potential for groundings compounded by remoteness, limited readily deployable SAR facilities, delays in emergency response and limited communications capability, with the potential to affect incident response;
- .7 potential lack of ship crew experience in polar operations, with potential for human error;
- .8 potential lack of suitable emergency response equipment, with the potential for limiting the effectiveness of mitigation measures;
- .9 rapidly changing and severe weather conditions, with the potential for escalation of incidents; and
- .10 the environment with respect to sensitivity to harmful substances and other environmental impacts and its need for longer restoration.

Part I: Maritime Safety



How to mitigate the risks?

Operational limitations

Formal requirements:

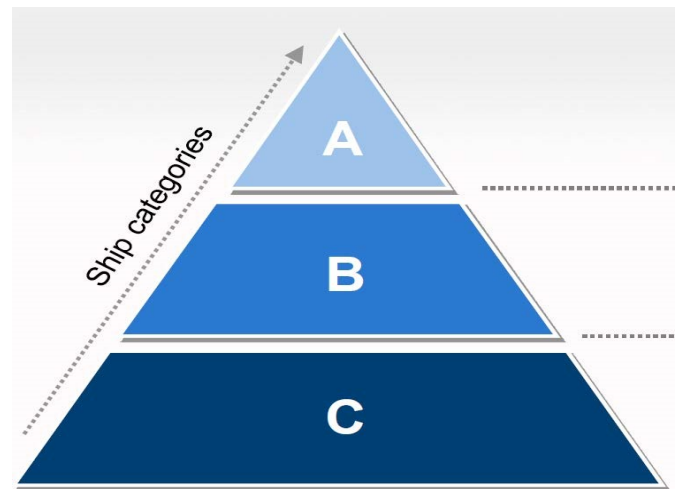
- Polar Ship Certificate
- Polar Waters Operational Manual

Sources of risks/hazards:

- Sea ice
- Low temperatures
- Adequate and competent crew

Operating within the limitations

- Polar Operational Limit Assessment Risk Indexing System (POLARIS)



Polar Class	General Description
PC 1	Year-round operation in all polar waters
PC 2	Year-round operation in moderate Multi-year ice conditions
PC 3	Year-round operation in Second-year ice with Old ice inclusions
PC 4	Year-round operation in thick, First-year ice with Old ice inclusions
PC 5	Year-round operation in medium, First-year ice with Old ice inclusions
PC 6	Summer/autumn operation in medium, First-year ice with Old ice inclusions
PC 7	Summer/autumn operation in thin, First-year ice with Old ice inclusions

Marine environmental protection

Effects of shipping on the polar marine environment

Areas of possible regulations:

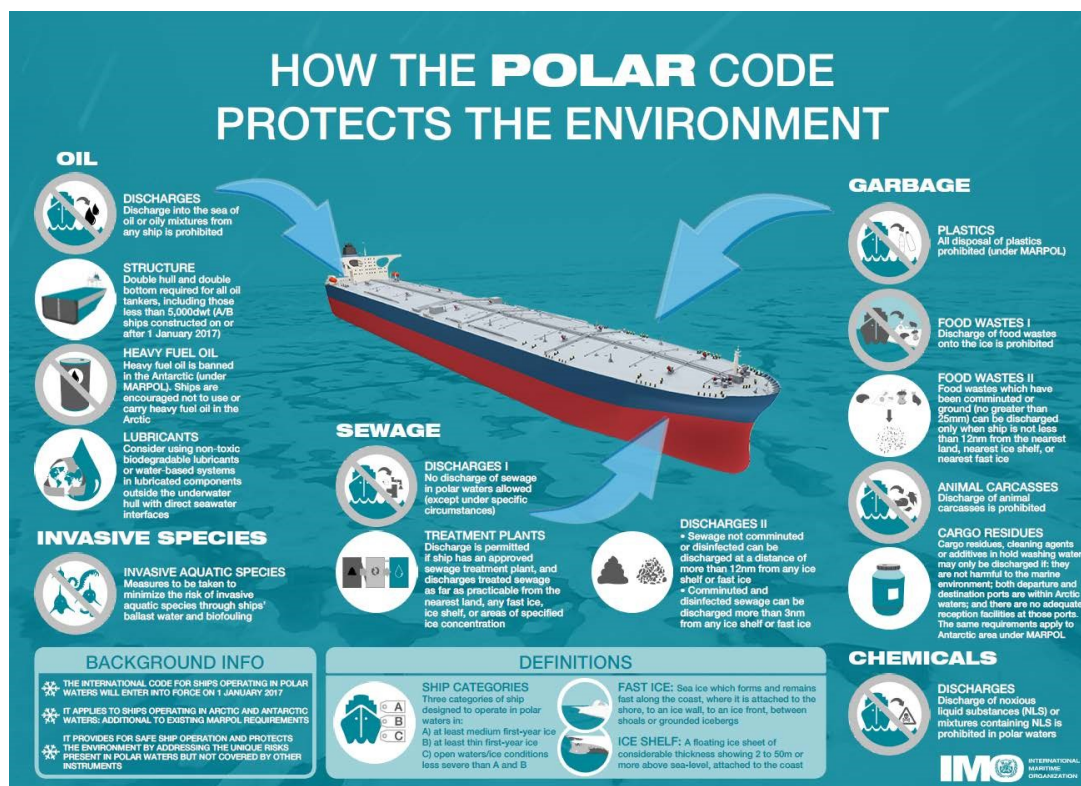
- Ban on transport of MARPOL Annex I and II cargoes
- Operational discharge of oil
- Sewage and grey water, garbage
- Emissions to air (incl. black carbon)
- Others (e.g. noise, ship strikes, ballast water)

The Polar Code - Pollution prevention measures:

- **Oil pollution:** Any discharge into the sea of oil and oily mixtures is prohibited
- Pollution from **noxious liquid substances:** Any discharge is prohibited
- Pollution from **sewage:** Additional requirements on distance from ice and ban from new vessels
- Pollution from **garbage:** Additional restrictions on discharge of food waste



Polar Code and Protection of the Marine Environment



Remaining issues

Application:

- Non-SOLAS vessels:
 - Vessels on domestic voyages
 - Smaller vessels
 - Fishing vessels

Higher protection level:

- Transport/use of HFO
- Air pollution (incl. black carbon)
- Ice navigator/pilotage
- Notification/position reporting
- Routeing measures (e.g. areas to be avoided)
- Area-based measures

Implementation of the Polar Code and the Law of the Sea

Flag State:

Obligation to exercise effective jurisdiction in safety and environmental protection matters (UNCLOS Articles 194 and 211)

Arctic coastal States:

Normal jurisdiction within:

- 12 nautical miles territorial sea
 - 200 nautical miles EEZ
- (UNCLOS Article 211 paras 4 and 5)

Extended environmental jurisdiction
(UNCLOS Article 234):

- «ice covered areas»
- "within the limits of the EEZ"

Port States:

- Port State Control (seaworthiness)
- Pollution in areas beyond their jurisdiction



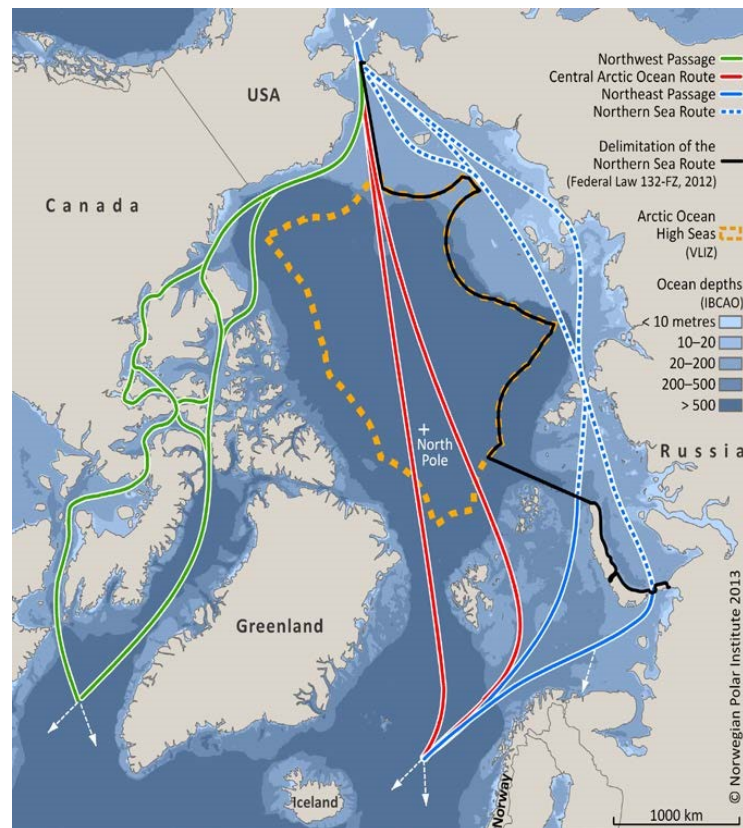
The Polar Code and UNCLOS Article 234

The Polar Code could serve as a means for promoting harmonized and uniform requirements for Arctic shipping

Does it restrict Arctic coastal States right to adopt (stricter) requirements under UNCLOS Article 234?

SOLAS regulation XIV/2: “Nothing in this chapter shall prejudice the rights or obligations of States under international law”

MARPOL Article 9(2): “Nothing in the present Convention shall prejudice ... the present or future claims and legal views of any State concerning the law of the sea and the nature and extent of coastal and flag State jurisdiction



Conclusions

- Polar Code in operation:
 - Enter into force
 - National implementation
- The importance of its context, legal as non-legal:
 - Global (other IMO regulations)
 - Regional cooperation (e.g. SAR, port state)
 - Coastal State regulations and enforcement
 - Still remote, ice-covered, cold