DEVELOPMENT OF A MANDATORY POLAR CODE – UPDATE ON PROGRESS

Dr. H. Deggim
IMO, Marine Technology Section
Presentation topics

IMO and ships operating in polar waters

- Existing regulatory framework for ice-covered areas
  - SOLAS, MARPOL and STCW requirements
  - Related guidelines and recommendations
  - Fishing vessels

- Current activities in IMO with regard to polar areas, specifically the ongoing development of a mandatory International Code of Safety for Ships Operating in Polar Waters
The regulatory framework

Requirements affecting ships operating in polar regions

Safety requirements apply to all ships which are subject to the Convention operating in Polar regions.

Legal framework governing the rights and responsibilities of nations in their use of ocean space.

Provides the mandatory level environmental protection with zero discharge requirements for Antarctica.

Newly adopted guidance and recommendations for training and competency of officers and masters on ships in polar regions.

- Legal framework governing the rights and responsibilities of nations in their use of ocean space
- Entered into force in 1994, to date signed by 162 countries
- Article 234: “Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone ...”
SOLAS requirements

Chapter V navigational requirements

<table>
<thead>
<tr>
<th>Regulation V/5</th>
<th>Meteorological services and warnings</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• collection examination, dissemination and exchange of meteorological data by ships at sea, including ice data</td>
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<thead>
<tr>
<th>Regulation V/6</th>
<th>Ice Patrol Service</th>
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<tr>
<td></td>
<td>• requires ships transiting the region of icebergs guarded by the Ice Patrol during the ice season to make use of the services provided by the Ice Patrol</td>
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<tr>
<th>Regulations V/31 and V/32</th>
<th>Danger messages</th>
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<td></td>
<td>• obliging masters to communicate information on dangers to navigation, including dangerous ice, and specifications</td>
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Ship stability

2008 Intact Stability Code

- mandatory (Part A) and recommendatory (Part B) provisions concerning intact stability of all types of ships covered by IMO instruments

- Part B, chapter 6 (Icing considerations) contains provisions for ships operating in areas where ice accretion is likely to occur which would adversely affect a ship’s stability and provides that icing allowances should be included in the analysis of conditions of loading
Guidelines for ships in polar waters

Recommendations for ships operating in polar waters

- 2002 - MSC/Circ.506 – Guidelines for ships operating in Arctic ice-covered waters
- 2004 - ATCM request to extend to Antarctic
- 2007 – MV Explorer sinking
- 2009 – A.1024(26) – Guidelines for ships operating in polar waters
Guidelines for ships operating in polar waters

- Adopted by 26th IMO Assembly in 2009

- Main features:
  - Requirements for ship construction, equipment, operation and environmental protection
  - Application extended to all polar waters, i.e. Arctic and Antarctic, and not only ice-covered
  - Only partially or totally enclosed lifeboats allowed
  - Qualifications of ice navigators
  - High standards for environmental protection
  - New damage stability provisions in line with revised SOLAS chapter II-1
Cold water survival

The Pocket Guide

- MSC.1/Circ.1185 – Guide to cold water survival
- Advice on how to prevent or minimize hazards of cold exposure, including self-help techniques
- Useful checklists for cold water survival and for rescuers
Remoteness from SAR facilities

IMO Guidance for ships operating in remote areas

- Guidance for passenger ships operating in areas remote from SAR facilities (MSC.1/Circ.1184)
  Enhanced planning arrangements for ships operating in remote areas, including close cooperation and liaison with relevant RCCs.

- Guidelines on voyage planning for passenger ships operating in remote areas (A.999(25))
  Recommends additions to voyage and passage plan, such as details on ice and ice formations, ice navigators, operational limitations due to ice, safe distance to icebergs, carriage of special or enhanced equipment.
### POLAR CLASS DESCRIPTION

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
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<tbody>
<tr>
<td>PC1</td>
<td>Year-round operation in all ice-covered waters</td>
</tr>
<tr>
<td>PC2</td>
<td>Year-round operation in moderate multi-year ice conditions</td>
</tr>
<tr>
<td>PC3</td>
<td>Year-round operation in second-year ice which may include multi-year ice inclusions</td>
</tr>
<tr>
<td>PC4</td>
<td>Year-round operation in thick first-year ice which may include old ice inclusions</td>
</tr>
<tr>
<td>PC5</td>
<td>Year-round operation in medium first-year ice which may include old ice inclusions</td>
</tr>
<tr>
<td>PC6</td>
<td>Summer/autumn operation in medium first-year ice which may include old ice inclusions</td>
</tr>
<tr>
<td>PC7</td>
<td>Summer/autumn operation in thin first-year ice which may include old ice inclusions</td>
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</tbody>
</table>

### IMO Polar Guidelines

- Only ships with Polar Class designation, based on IACS Unified Requirements for Polar Class Ships, should operate in polar waters
- Or comparable alternative standard of ice-strengthening
- Ice description follows WMO sea ice nomenclature (see box opposite)
# MARPOL requirements

## Antarctic – zero discharge protection

### MARPOL Annex I

**Control of discharge of oil and reception facilities**
- Prohibits any discharge into the sea of oil or oily mixtures from any ship in the Antarctic area; requires adequate reception facilities

### MARPOL Annex II

**Control of discharge of residues of noxious liquid substances**
- Prohibits any discharge into the sea of noxious liquid substances or mixtures containing such substances in the Antarctic area

### MARPOL Annex V

**Disposal of garbage**
- Prohibits the disposal into the sea of all plastics and all other garbage; requires reception facilities, with special rules for the Antarctic area
**Other MARPOL requirements**

**Prevention of oil pollution in polar regions**

<table>
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<tr>
<th><strong>Use and carriage of heavy grade oil</strong></th>
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<tr>
<td>New chapter 9 of MARPOL Annex I, establishing a ban on the use and carriage of heavy grade oils in the Antarctic area, entered into force on 1 August 2011.</td>
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<tr>
<th><strong>Oil spill response in ice and snow conditions</strong></th>
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<tr>
<td>The OPRC-HNS Technical Group operating under the MEPC is preparing guidance on oil spill response in ice and snow conditions.</td>
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</table>
Training and competency of seafarers

- **Training guidance for personnel on ships operating in ice-covered waters**
  Newly adopted guidance stresses importance for officers in charge of a navigational/engineering watch on board ships operating in polar waters to have sufficient and appropriate experience with polar waters.

- **Measures to ensure the competency of masters and officers of ships operating in polar waters**
  Recommends that Governments adopt measures to ensure that masters and officers of ships operating in polar waters have appropriate training and experience.
# Fishing vessels

## Ice accretion

<table>
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<tr>
<th>Torremolinos Protocol</th>
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<tbody>
<tr>
<td><strong>Regulation III/8 – Ice accretion</strong></td>
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<tr>
<td>• Icing allowances for stability calculations, ship design to minimize ice accretion, means for removing ice</td>
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<th>Code of safety for fishermen and fishing vessels</th>
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<td><strong>Part A, appendix 10, and Part B, section 3.8</strong></td>
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<tr>
<td>• Reduction of formation of ice and icing allowances for stability calculations for fishing vessels of 24 m and over in length</td>
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<th>Voluntary guidelines for small fishing vessels</th>
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<tr>
<td><strong>Design, construction and equipment</strong></td>
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<tr>
<td>• Provisions regarding ice accretion and combating of ice formation for fishing vessels between 12 m and 24 m in length</td>
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Mandatory Polar Code

New IMO instrument under development

- MSC 86 in 2009 approved proposals for development of mandatory Polar Code and instructed DE S-C
- Recognition that different measures for Arctic and Antarctic may be appropriate
- DE 53 in 2010 started work on the development
- Basic structure of draft **Code of safety for ships operating in polar waters** under development by Correspondence Group for further work by DE 55 in February 2012
Mandatory Polar Code

Issues under consideration

- Goal-based: objectives and functional requirements
- Hazard identification, risk analysis and risk control options
- Application to ship types/sizes (SOLAS, non-SOLAS)
- Mandatory and recommendatory provisions
- Operational limitations based on geographical boundaries
- Risks posed by shipping to Arctic indigenous and other local communities
- Add-on Code versus stand-alone instrument
Mandatory Polar Code

Contents of the draft Code

- Certification
- Design
- Equipment and systems
- Operation
- Environmental protection
- Manning and training (to some extent)
Categories of ships operating in polar waters

- **A**: Operating in waters with 10% or more ice
  - Polar class or equivalent

- **B**: Operating in waters with less than 10% ice, but which may pose a structural risk
  - Assessment/ice-strengthening

- **C**: Operating in waters with 0 to 10% ice, but which does not pose a structural risk
  - No ice-strengthening
Challenges

- Geographical limitations – new discussion
- Additional risks/additional requirements
- Mitigation of additional risks
- Extent of additional environmental protection measures
- Fishing vessels/ passenger non-SOLAS ships
- Ship categories A, B and C – especially the C category
- Sailing permit system in addition to ice certification
- Time – progress
Mandatory Polar Code

Current geographical boundaries Arctic/Antarctic (as set out in Polar Guidelines) under consideration
Mandatory Polar Code

Polar Workshop, Cambridge, 27 to 30 Sep 2011

- Environmental aspects of Polar Code
- Hazard identification workshop
- IMO Member States + observers
- Objective: identify all potential hazards and their causes for navigation in polar waters
- Routine releases into environment (combustion gases, bilge water, ballast water, lubricants, waste, etc.)
- Accidental releases into environment (cargo, containers, bunker fuel oil)
- Report to DE 55 in Feb 2012
Thank you for listening.

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