

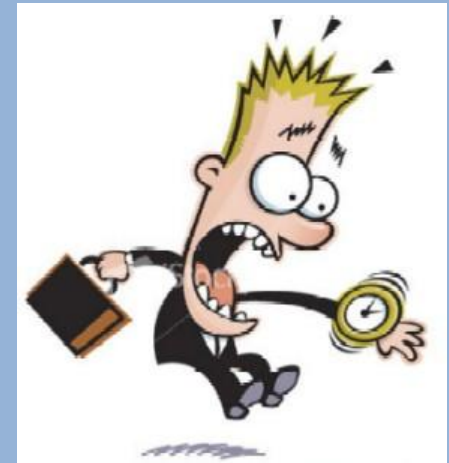
The Governance of Arctic Marine Shipping: Breaking Ice, Sea of Challenges

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Introduction

- Two Images Help Capture the Status of and Future Directions for Agreements/Arrangements Governing Shipping in the Arctic
1. Breaking Ice (Various regional and international propulsions have emerged towards governance strengthenings)
 2. Sea of Challenges (Numerous law and policy issues remain to be resolved)
- A Two-Part “Speed Cruise” Follows



1. Breaking Ice (Recent Propulsions Forward)

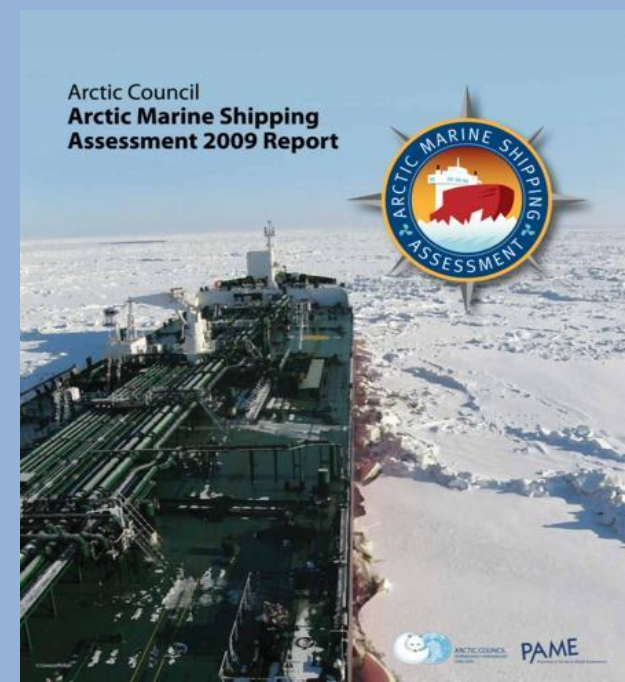
Five governance-related progressions stand out

- Two Regional Propulsions

(1) Publication by the Arctic Council of the *Arctic Marine Shipping Assessment* (AMSA) in April 2009

- The AMSA Report made 17 recommendations on possible ways forward in strengthening the protective regime for Arctic shipping.

Examples of the recommendations organized under three themes included:



- Enhancing Arctic Marine Safety (Theme 1)
 - * Making the voluntary *Guidelines for Ships Operating in Arctic Ice-covered Waters* (2002) a legally-binding code
 - * Augmenting existing IMO conventions on ship safety and pollution prevention with specific requirements for ship construction, design, equipment, crewing, training and operations
 - * Exploring the possible harmonization of national standards for regulating ship-source pollution
 - * Developing a multi-national Arctic Search and Rescue instrument in light of the region's remoteness and limited response resources
- Protecting Arctic People and the Environment (Theme 2)
 - * Conducting surveys on Arctic marine uses by indigenous communities and potential impacts from shipping activities (and filling any informational gaps)



- * Identifying areas of heightened ecological and cultural significance and encouraging protective measures against the impacts of Arctic marine shipping
- * Ratifying as soon as practical by all Arctic States of the IMO *Ballast Water Convention* and assessing the risks of invasive species introductions in the Arctic through ballast water
- * Assessing the effects of ship noise and strikes on marine mammals and considering work within the IMO to develop mitigation strategies



- * Possibly designating regions of the Arctic Ocean as
 - > “Special areas” where more stringent than normal discharge standards would apply under the *International Convention for the Prevention of Pollution from Ships* (MARPOL) for oil (Annex I), noxious liquid substances (Annex II), garbage (Annex V) and air emissions (Annex VI)
 - > Particularly Sensitive Sea Areas (PSSAs) under IMO’s *Guidelines for the Identification and Designation of PSSAs* (2005) where associated protective measures can be imposed, such as vessel routings and areas to be avoided
- Building Arctic Marine Infrastructure (Theme 3)
 - * Improving Arctic marine infrastructure in such areas as navigational charting, communications systems, port services, reception facilities for ship-generated waste and ice-breaker assistance
 - * Developing further circumpolar environmental pollution response capabilities

- + The PAME Working Group has developed a follow-up matrix on AMSA recommendations and a progress report on follow-up actions will be reviewed at the PAME meeting following this workshop
- (2) Decision by Arctic Council Ministers in April 2009 to establish a Task Force to negotiate an international instrument on Search and Rescue cooperation in the Arctic (a second regional propulsion)
 - + Negotiation deadline set for the next ministerial meeting in 2011
 - + Three negotiation sessions have already occurred
 - + Fourth round scheduled for Helsinki, October 6-8
 - + Various issues still to be resolved, e.g. whether to allow non-Arctic States to participate in some way
- Three Global Propulsions
 - (1) Adoption of revised *Guidelines for Ships Operating in Arctic Ice-covered Waters* by the IMO Assembly on 2 December 2009
 - + Extended application to both Arctic and Antarctic waters
 - + Renamed the Guidelines as *Guidelines for Ships Operating in Polar Waters*

(2) Decision within the IMO to develop a mandatory Code for Ships Operating in Polar Waters

- + Sub-Committee on Ship Design and Equipment (DE) has been tasked with the mandatory transformation by 2012
- + At its 53rd Session in March 2010, the DE Sub-Committee agreed to establish a Correspondence Group under the coordination of Norway
 - To further develop a draft mandatory code
 - To report back to the 54th session of the DE Sub-Committee in October 2010



(3) Adoption of recommended training requirements for masters and officers in charge of ships operating in polar waters

- + “Manila amendments” of June 2010 to the *Seafarers’ Training, Certification and Watchkeeping (STCW) Code* include a section B-V/g which suggests various subjects where masters and officers should have “basic knowledge” through experience and training
- + For example, masters and officers in charge of a navigational watch in polar waters should have basic knowledge of
 - Ice characteristics
 - Safe vessel routing and passage planning
 - Operation of a ship in ice
 - Equipment limitations
 - Emergency procedures
 - Pollution regulations

2. Sea of Challenges

A “top ten” list of challenges

(1) Reaching Agreement on Mandatory Polar Code Contents, e.g.

+ Should the geographic scope of application of the present voluntary guidelines be broadened?

DE 53/18/2
ANNEX
Page 11

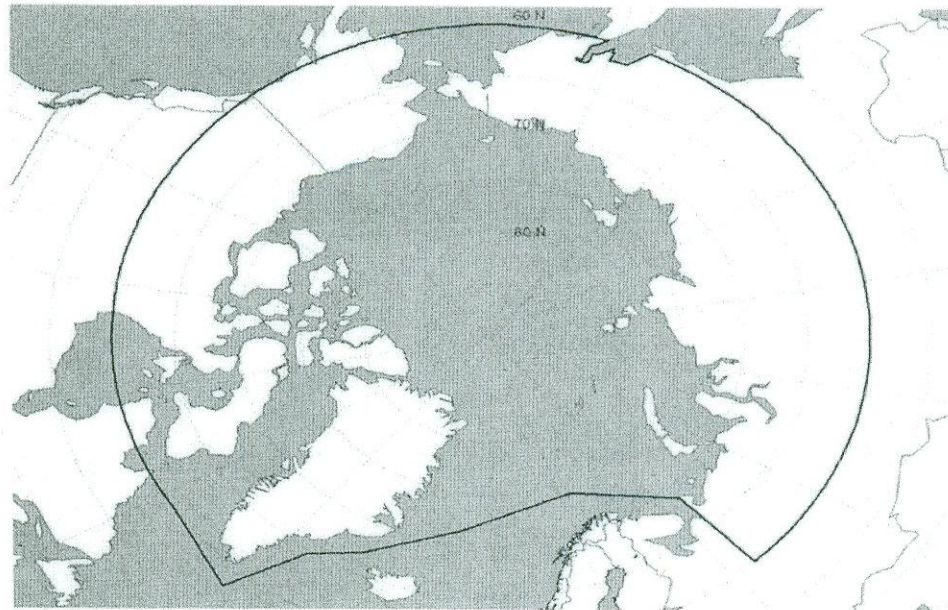


Figure 1 – Maximum extent of Arctic waters application (see paragraph 3.3)²

- + Which ships should be covered? Extension to barges, fishing vessels and pleasure craft?
- + What training standards should be included, for example, for ice navigators in terms of classroom and practical experience?
- + Whether and how to address ballast water and hull-fouling threats?
- + Should a permit to operate certificate from national administrators serve as a key control document?
- + What type of phase-in requirements should be included for existing ships?
- + Should differential as well as common standards be adopted for the Arctic and Antarctic
- + What provisions should be mandatory versus recommendary in a new code?
- + What environmental issues should be addressed, for example, special risks of carrying liquid chemicals in bulk and packaged dangerous goods in the Arctic?

AMSA, p. 124



(2) Setting Strict Pollutant Discharge Standards for Ships Across the Arctic

+ Two main avenues possible

– Through IMO

* “Special Area” designations under MARPOL

* “Particularly Sensitive Sea Area” designations under IMO *Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas* (2005)

* Pollutant discharge standards incorporated in a new polar code

– Through harmonization of strict national standards allowed by Art. 234 of the 1982 *UN Convention on the Law of the Sea* (e.g. Canada presently imposes zero discharge standards for oil and garbage)



- + Sewage pollution from ships, especially cruise ships, looms as a high priority in light of MARPOL's weak Annex IV discharge standards for sewage
 - Allows raw sewage to be discharged at a distance of more than 12 nautical miles from the nearest land (with sewage stored in holding tanks not to be discharged instantaneously but at a moderate rate when the ship is proceeding at not less than 4 knots)
 - Does not cover “grey water” from showers, laundries and galleys

AMSA, p. 137



(3) Deciding Whether to Ban the Use and Carriage of Heavy Fuel Oil (HFO) on Ships Operating in the Arctic

- + In March 2010, IMO's Marine Environment Protection Committee adopted a ban on the use and carriage of HFO on ships operating in the Antarctic Treaty Area (effective from 1st August 2011)
- + Norway is presently leading a project under the Arctic Council's PAME Working Group to study the risks of HFO use in the Arctic and to possibly suggest international regulation

(4) Ensuring Adequate Emergency Response Capabilities in the Arctic

- + Should a regional emergency pollution response agreement be negotiated in the wake of a regional Search and Rescue Agreement?
- + Are existing bilateral emergency pollution response agreements adequate?
- + How sufficient are national emergency pollution response capabilities in the Arctic?

(5) Identifying Ecologically and Culturally Significant Areas and Adopting Associated Protective Measures Such as Vessel Routeings and Areas To Be Avoided

- + Example of the challenge demonstrated by Canada
- + Canada presently has no specific legally-binding routeing requirements for the Arctic
- + Canada merely has some recommendary suggestions such as advising ships to stay at least 10 miles away from shore on the north and south coasts of Lancaster Sound in order to avoid fall migrations of marine mammals



The Canadian Coast Guard icebreaker Louis S. St-Laurent sails past a iceberg in Lancaster Sound as part of a sovereignty and research patrol through Canada's Arctic in July 2008. (Jonathan Hayward/Canadian Press)



AMSA, p. 129

(6) Addressing Noise Impacts on Marine Life from Commercial Shipping

- + No international standards presently exist on controlling noise levels external to ships
- + A Correspondence Group on the issue of ship noise and its adverse impact on marine life has studied possible ways of vessel quieting and has recently recommended to the IMO Marine Environment Protection Committee the development of non-binding technical guidelines on the topic

(7) Meeting the Challenges of Arctic Marine Tourism

- + Should there be limits on the number of passengers that can be carried aboard cruise ships in the Arctic?
- + Should there be limits on the number of passengers that can be landed in particular locations in order not to overwhelm the local environment and/or community?
- + Should cruise ship “pairing” be required at least in some remote areas?
- + Might “best practices” by cruise line operators be sufficient?



(8) Addressing National Infrastructure Deficits

- + The need to improve Arctic marine infrastructure in such areas as navigational charting, aids to navigation, communication systems, port services and waste reception facilities, was emphasized by the AMSA report (p. 7)
- + Since infrastructure improvements are primarily a national responsibility, a looming challenge is to understand and track national initiatives to strengthen shipping infrastructure
 - Should a comprehensive assessment of national infrastructure capabilities be undertaken?
 - Should a national reporting mechanism be instituted?

AMSA, p. 175



(9) Reducing Emissions of Black Carbon from Shipping in the Arctic

- + Black carbon, emitted from ships through incomplete combustion of diesel fuel, is a growing concern because of its climate warming potential (estimated to cause some 680 times more warming than the same amount of CO₂ over 100 years)
- + Various control options exist, such as
 - Reducing vessel speed
 - Modifying vessel and propeller designs to reduce fuel consumption
 - Use of alternative power techniques such as wind-sails
 - Improved ship routing
 - Installation of diesel particulate filters
- + Initial proposals for action are still at the “discussion stage” within the IMO Marine Environment Protection Committee

AMSA, p. 140



(10) Getting a Legal Grip on Greenhouse Gas Emissions from Ships

- + A plethora of reports and discussion papers have been issued under the IMO MEPC umbrella with a wide range of GHG reduction approaches being suggested, for example
 - Establishing energy efficiency standards for ships
 - Use of CO₂ abatement technologies
 - Resort to market-based measures such as placing a surcharge on bunker fuels and creating a cap and trade system on emissions
- + Legal implementation measures have yet to be taken
- + Still some “tensions” over the appropriate roles of the IMO and the *UN Framework Convention on Climate Change* processes

AMSA, p. 83



Parting Thoughts:

- The Arctic Shipping Governance Voyage Has Hardly Left Port!!



http://www.nascocorridor.com/naipn/pages/win_infra.html

- Possible Discussion - Are There Additional Shipping Governance Challenges That Should Be Considered Beyond the “Top Ten” Suggested?