

The Governance of Arctic Shipping: Conflict, Cooperation, Challenges

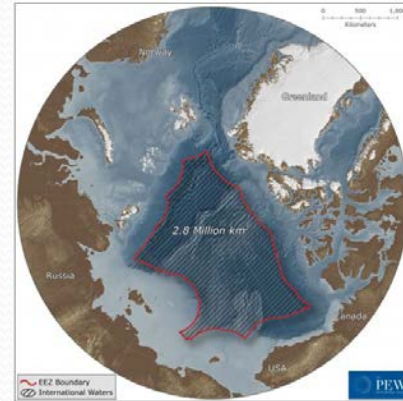
Professor David L. VanderZwaag
Canada Research Chair in
Ocean Law and Governance
Marine & Environmental Law Institute
Schulich School of Law
Dalhousie University



Warming of the North Conference
Ottawa Convention Centre (Shaw Centre)
2-3 March 2015

Introduction

- Three words help capture the present state of Arctic shipping governance
 1. **Conflict** – Jurisdictional disputes still hover over parts of the Arctic
 2. **Cooperation** – Numerous cooperative agreements and arrangements have been forged at the bilateral, regional and global levels
 3. **Challenges** – A sea of ocean governance challenges still confronts the region, e.g.
 - + Sorting out future governance arrangements for the central Arctic Ocean (CAO) beyond national jurisdiction



- + Identifying and protecting areas of heightened ecological and cultural significance

- A three-part “speed cruise” follows



1. Conflict

Four key jurisdictional tensions relevant to shipping hover over the Arctic

(i) Beaufort Sea boundary between Canada and the United States

- + Canada claims the 141st meridian as the Beaufort Sea boundary
 - Based upon 1825 Great Britain-Russia Treaty
 - Boundary language of the Treaty refers to the meridian line “in its prolongation as far as the Frozen Ocean”
- + US argues an equidistance line should apply
 - Based upon customary international law relating to maritime boundary delimitation
 - Views the 1825 Treaty as only delimiting the land boundary
- + Some 6250 square NM in dispute
- + Not clear which country has jurisdiction over shipping activities in the disputed area

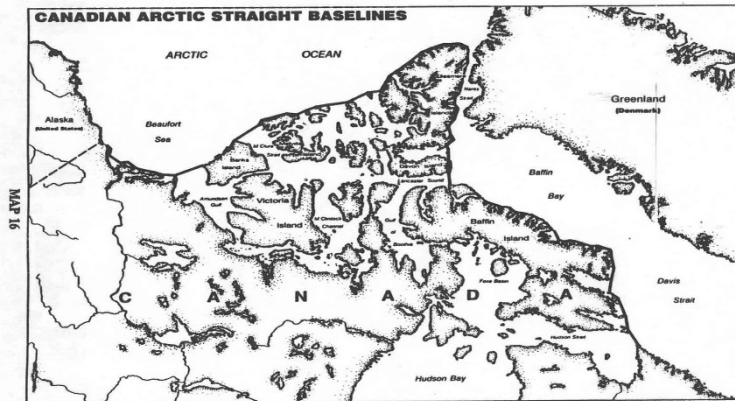
(Gray 1997)



(ii) Legal Status of the Northwest Passage

+Canada maintains the NWP consists of internal waters

- Drew straight baselines around the Canadian Arctic Archipelago, effective January 1, 1986 (full national sovereignty over the internal waters enclosed)
- Has unilaterally established “zero pollution” standards for oil, garbage and waste disposals from Arctic shipping pursuant to the *Arctic Waters Pollution Prevention Act*
- Has imposed special construction, design, equipment and crewing standards, e.g.

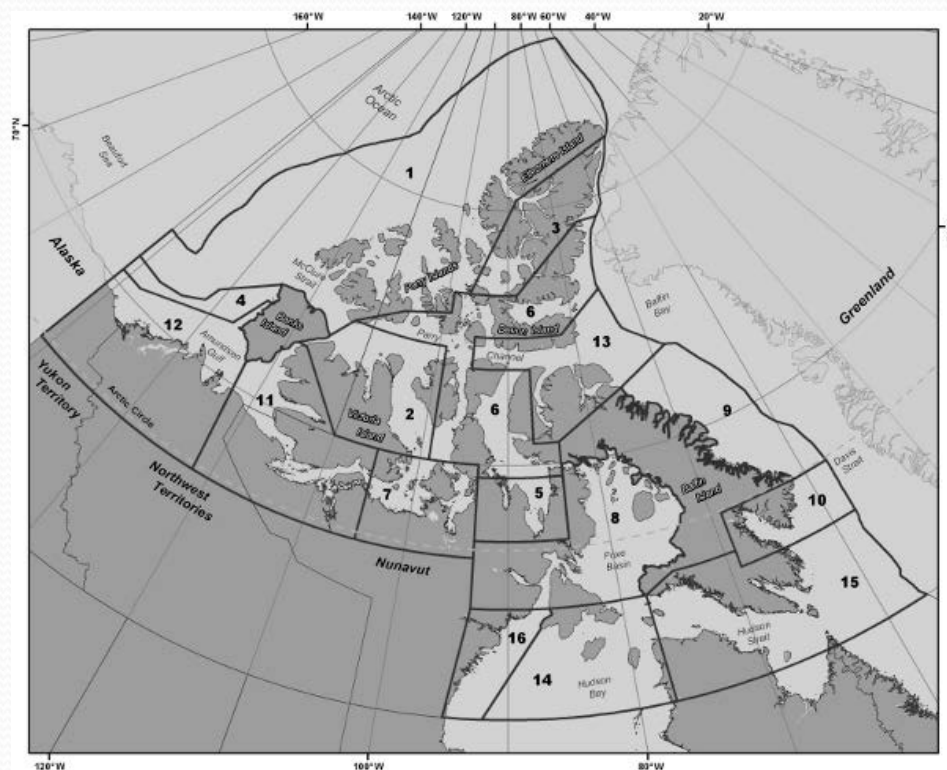


(Roach and Smith 1996)

- * Ships over 100 gross tonnage and carrying oil in excess of 453m³ are not allowed to navigate in Arctic waters unless they meet special construction standards set out in the *Arctic Shipping Pollution Prevention (ASPP) Regulations*
- * Actual navigation of such ships in the Arctic is further controlled according to their ice capabilities and a zoning system



- > Canada has zoned its Arctic waters into 16 Shipping Safety Control Zones
- > Zone 1 is considered to have the most challenging ice conditions
- > Zone 16 is assumed to have the easiest
- > Canada restricts navigation in the zones based upon the ice capability of ships (14 categories of ships set out in Regulations)



- Two main legal foundations for internal waters status
 - * Historic waters (subject to Canadian exclusive control over many years with the acquiescence of other States to the exclusive authority)
 - * Waters within straight baselines drawn around a “fringe of islands” along the coast
- Two main arguments can be made against the Canadian drawing of straight baselines around the Arctic Archipelago
 - * The islands are not in the “immediate vicinity” of the coastline as required by Art. 7(1) of the Law of the Sea Convention



- * The drawing of straight baselines “must not depart to any appreciable extent from the general direction of the coast” (Art. 7(3))

+ U.S. legal stance – NWP is an international strait subject to the right of transit passage by foreign ships

- Transit passage substantially limits controls a coastal State like Canada could impose on foreign ships navigating through strait waters
 - * Coastal State cannot impose its own pollution control or safety at sea standards (international standards apply) (Art. 39)
 - * Coastal State can designate sea lanes and prescribe traffic separation schemes for navigation where necessary to promote the safe passage of ships but IMO approval is required (Art. 41)
 - * Coastal State cannot prohibit foreign ship transits because of risky cargoes, such as hazardous or radioactive wastes



- Considerable debate exists over whether the Northwest Passage has become a “strait used for international navigation”
- * No question that Northwest Passage meets the geographic condition set out by the Law of the Sea Convention (Art. 37)
(Connecting one part of the high seas or an exclusive economic zone with another part of the high seas or an EEZ)
- * Big issue is what constitutes the legal litmus for navigational usage
Potential vs. actual usage
Volume of traffic required
Number of different flagged vessel transits



(iii) Tensions over the extent of special legislative and enforcement powers bestowed on coastal States by Article 234 of the 1982 Law of the Sea Convention over ice-covered waters

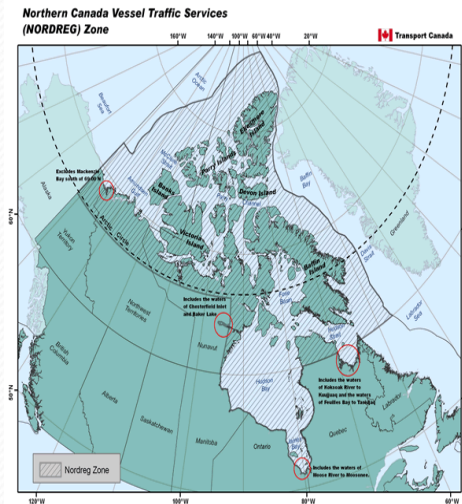


Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climate conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence. (emphasis added)

- + Various issues continue to surround the practical implementation of Article 234
- + What exactly does ice-covered waters for “most of the year” mean?
- + Is the Article applicable to an ice-covered strait used for international navigation?



- + Can Article 234 be used to justify unilateral coastal State imposition of ship reporting measures?
 - Effective 1 July 2010 Canada imposed mandatory reporting requirements for certain classes of vessels preparing to navigate within the Northern Canada Vessel Traffic Services (NORDREG) Zone which covers the Shipping Safety Control Zones and other northern waters such as Hudson and James Bay



- * Vessel coverages
 - > Vessels of 300 gross tonnage or more
 - > Vessels engaged in towing or pushing another vessel if the combined gross tonnage of the vessel and the vessel being towed or pushed is 500 gross tonnage or more
 - > Vessels carrying as a cargo a pollutant or dangerous goods or engaged in towing or pushing a vessel with such a cargo

- A tussle, led by the United States, ensued within the IMO
 - * U.S. questioning whether Canada's NORDREG system was in compliance with SOLAS, chapter V requirements
 - > Canada should have worked through the IMO for formal approval
 - > A vessel traffic services (VTS) zone may only be made mandatory within the territorial sea of a coastal State
 - > Not clear that NORDREG gives "due regard to navigation"



- Canada responded in a very “diplomatic fashion”
 - * Submitted an explanatory document of its own
 - > Clarifying Canada’s reliance on Art. 234 for its unilateral imposition of NORDREG
 - > Noting that foreign sovereign immune vessels would be requested to voluntarily comply with NORDREG
 - > Requested IMO to bring the NORDREG system to the attention of member Governments which in fact occurred through an IMO information circular (SN.1/Circ. 291, 5 October 2010)



(iv) Legal status of straits within the Northern Sea Route

+The United States also contests Russia's claim to internal waters status of the Vilkitski, Shokalski, Dmitri Laptev and Sannikov Straits and the drawing of straight baselines around the associated island groups



(Lalonde and Lasserre 2014)

2. Cooperation

Substantial cooperation in addressing Arctic shipping issues has occurred at the bilateral, regional and global levels

(i) Bilateral

- + Canada and the USA have been able to cooperate in the wake of their ocean boundary and jurisdictional disputes, e.g.
 - Joint Marine Contingency Plan for the Beaufort Sea



- North American Aerospace Defense Command (NORAD) which extended cooperative surveillance to the maritime domain in May 2006
- Informal moratorium on petroleum exploration/exploitation in the disputed zone

- In 1988 Canada and the United States reached a “stalemate” Agreement on Arctic Cooperation
 - * Parties agreed to set aside their jurisdictional dispute over the legal status of the Passage by “agreeing to disagree”
 - * United States agreed that its icebreakers would be subject to Canadian consent for transits within waters claimed by Canada to be internal
 - * Countries agreed to share research information regarding the marine environment gained through icebreaker navigation



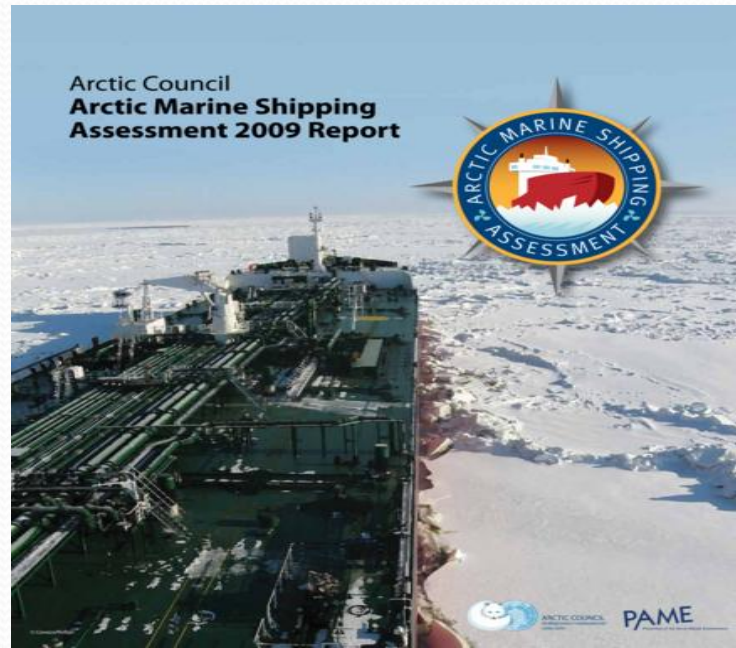
- * Some uncertainty over what was agreed to
 - > Whether U.S. just agreeing to subject government icebreakers undertaking marine scientific research (MSR) to the Canadian consent regime
 - > Whether all government icebreakers, even if not undertaking MSR, would be subject to the consent regime
- * Clear that commercial and naval vessels not included



(ii) Regional

Four shipping cooperation advances stand out at the regional level

- + Publication by the Arctic Council of the *Arctic Marine Shipping Assessment* (AMSA) in April 2009 (Co-led by Canada, USA and Finland). The AMSA Report made 17 recommendations on possible ways forward in strengthening the protective regime for Arctic shipping



Negotiation of a regional Aeronautical and Maritime Search and Rescue Agreement through an Arctic Council Task Force

- Agreed to at the May 2011 Nuuk Ministerial Meeting
- Delineates areas of national search and rescue (SAR) responsibilities in the Arctic
- Calls for further cooperation in joint exercises and training
- Provides for expedited cooperative national responses to SAR incidents



- + Conclusion of a regional Agreement on Cooperation on Marine Oil Pollution Preparedness and Response (2013)
 - Pledges Parties to maintain effective national oil pollution preparedness response systems
 - Calls for cooperation in response operations
 - Promotes joint exercises and training






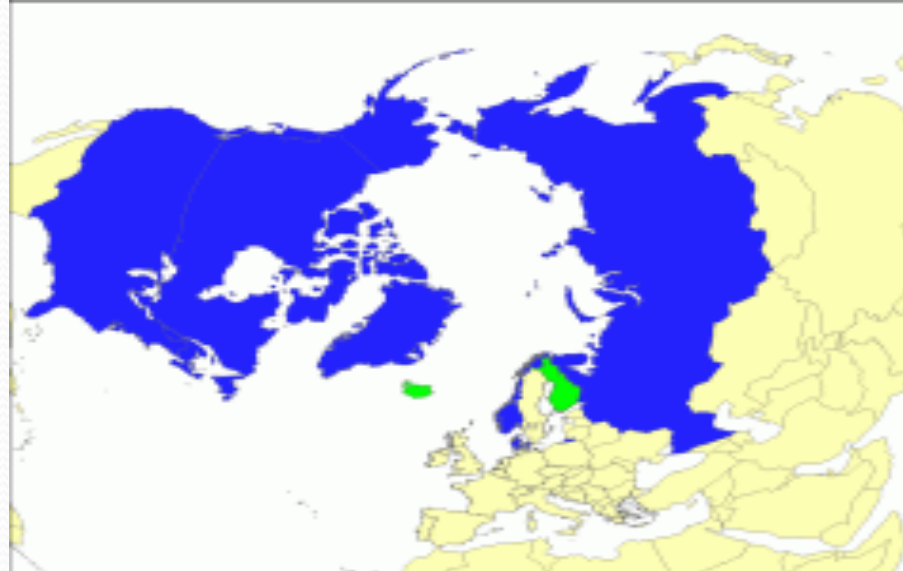
+ Establishment of a new Arctic Regional Hydrographic Commission (ARHC)




- To facilitate cooperation in undertaking surveys and enhancing nautical charting
- Members include Canada, Denmark, Norway, Russia, USA
- Has met on an annual basis (1st meeting in October 2010)

Arctic Regional Hydrographic Commission (ARHC)

Commission hydrographique régionale de l'Arctique (CHRA)

Members 
Associate Members 
Observers 



Membres 
Membres associés 
Observateurs 

(iii) Global

+ Cooperation within the International Maritime Organization to develop a mandatory Polar Shipping Code

- Expected to be concluded in 2015
- Will establish global standards for design, construction, equipment and operational requirements in support of maritime safety
- Promises to raise the level of global pollution discharge standards for Arctic shipping, e.g.
 - * Prohibiting any discharge into the sea of oil or oily mixtures from any ships
 - * Prohibiting the discharge of noxious liquid substances
 - * Restricting garbage discharges
 - > Limiting garbage discharges to food wastes
 - † Only permitted when the ship is en route and not less than 12 nm from the nearest land, nearest ice shelf, or nearest land-fast ice and garbage discharges must be as far as practicable from areas of ice concentration exceeding 1/10
 - † Food wastes must be comminuted or ground
 - † Wastes not to be discharged onto the ice



3. Challenges

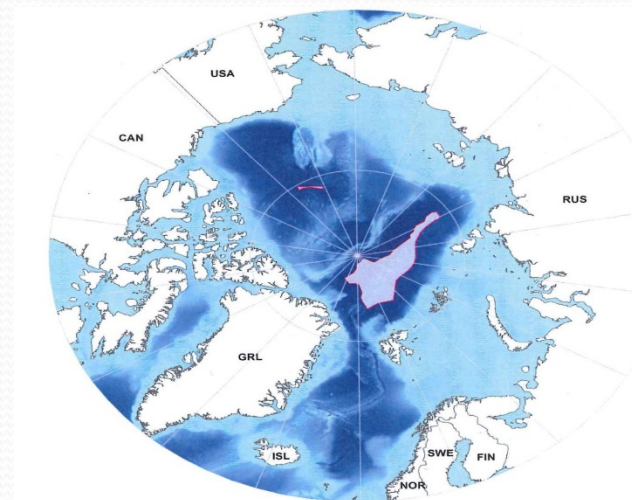
A sea of shipping governance challenges loom on the horizon with a “fast five” flagged here

(i) **Sorting out future governance of ship-related activities in the central Arctic Ocean beyond national jurisdiction**

+A large “donut hole” exists in the CAO beyond the 200 nm EEZs of coastal States



http://www.newscientist.com/data/images/ns/cms/dn17229/dn17229-1_500.jpg



(Kullerud et al. 2013)

- + At a meeting of the five Arctic coastal States in Ilulissat, Greenland (May 2008) representatives made clear that the law of the sea provides the overall governance framework
 - Various freedoms would be open to all States including the freedoms of navigation and fishing (Art. 87)
 - Mineral exploration and exploitation of the deep seabed would come under the jurisdiction of the International Seabed Authority (Art. 156)
 - Flag State jurisdiction would prevail as the prime principle for controlling activities (Art. 92)
 - Various responsibilities would fall upon States to control activities of their vessels and nationals on the high seas, for example, their duty to:
 - * Conserve fish stocks and to cooperate with other States in seeking to manage fish stocks jointly exploited (Art. 118)
 - * Undertake environmental impact assessments for planned activities, that may cause substantial pollution or significant and harmful changes to the marine environment (Art. 206)
 - * Generally to protect and preserve the marine environment (Art. 192)
 - Global shipping standards would be applicable



+ Two CAO challenges stand out

- How to control potential future commercial fishing activities in the donut hole?
- * The Arctic 5 have met periodically since 2010 to discuss scientific and policy issues and at their most recent meeting in Nuuk, Greenland (February 2014) they agreed to



- > Move forward with establishing interim measures to prevent commercial fisheries until one or more regional or sub-regional fisheries management organizations/arrangements are in place
- > Develop a Ministerial Declaration on interim measures for adoption by the Arctic 5 preferably in June 2014
- > Forge a broader process to involve other interested States with such a process to begin before the end of 2014

- * The proposed timing for the next steps has been delayed due to political fallout over the Russian Federation's annexation of Crimea and interventions in the Eastern Ukraine



- * Considerable tensions exist with the three other member States of the Arctic Council (Iceland, Finland, Sweden) over their being “left on the sidelines”
- * Not clear how indigenous groups and other States will be engaged

- Deciding whether to take further shipping control measures in the CAO, for example, areas to be avoided, vessel routings
- * Norway led a project within the PAME Working Group that considered the possible need for further measures
- * PAME is presently exploring whether one or more Particularly Sensitive Sea Areas (PSSAs) might be established in the CAO region



DET NORSKE VERITAS™

Report

SPECIALLY DESIGNATED
MARINE AREAS IN THE ARCTIC
HIGH SEAS

REPORT No./DNV REG No.: 2013-1442 / 17JTM1D-26
REV 2

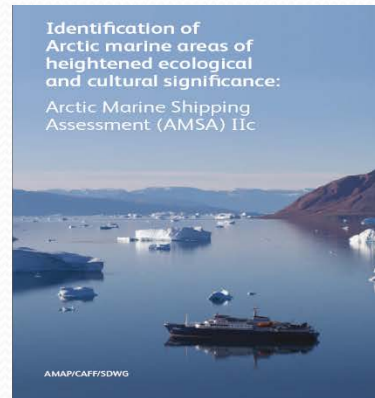
(ii) Identifying and protecting areas of heightened ecological and cultural significance in national waters

+The Arctic Council's *Arctic Marine Shipping Assessment* (AMSA 2009) flagged this as a key challenge



- Arctic States urged to conduct surveys on Arctic marine use by indigenous communities (Recommendation II.A)
- Arctic States encouraged to ensure effective coordination mechanisms are in place to engage coastal communities in helping to reduce the impacts from shipping (Recommendation II.B)
- Arctic States urged to identify areas of heightened ecological and cultural significance and to take protective measures (Recommendation II.C)

- + Some progress has been made in identifying significant marine areas with a 2013 report prepared by three of the Arctic Council's working groups



- Identified a total of about 97 areas of heightened ecological significance comprising more than half of the ice-covered part of the marine Arctic
- Admitted the lack of details on areas of heightened cultural significance

+ Two main legal routes possible for protecting ecologically and culturally significant areas

– Through unilateral national legal actions

* Pursuant to Art. 234 of the Law of the Sea Convention for ice-covered waters

* For internal waters and possibly the territorial sea

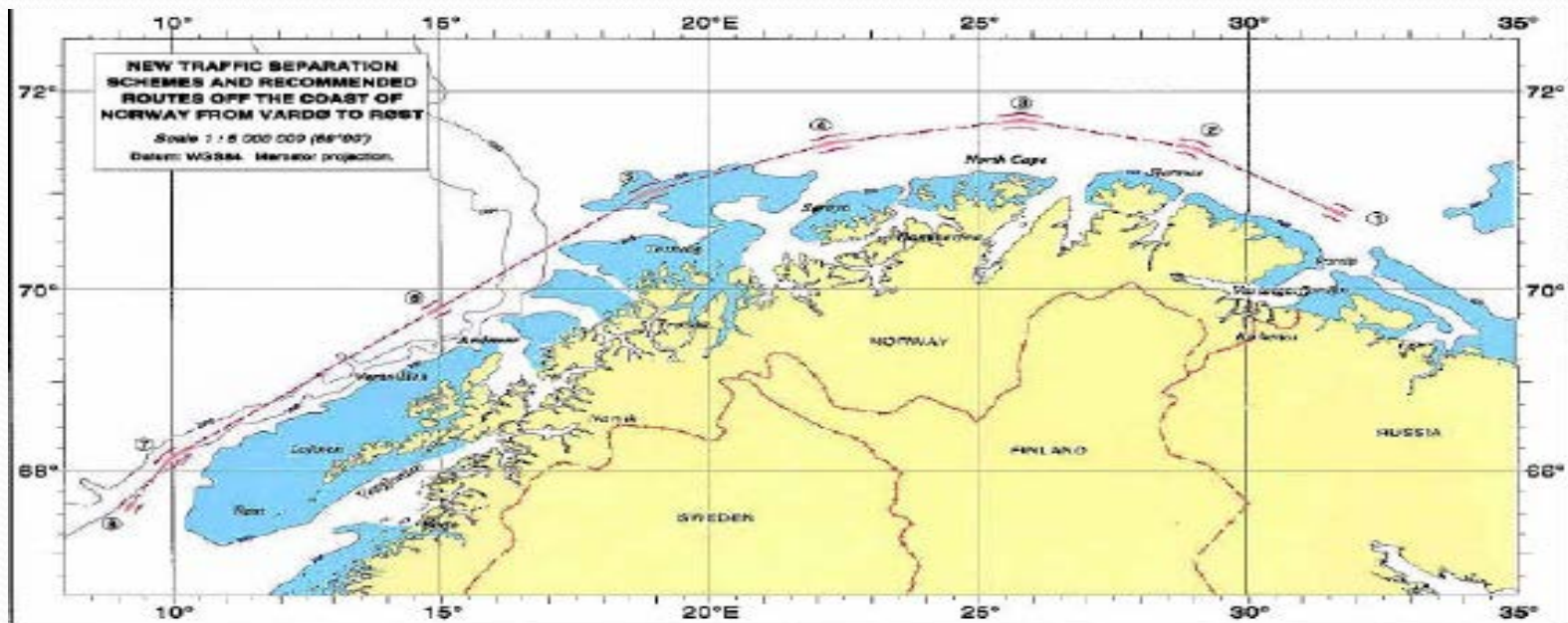


– Through the IMO

* Imposition of vessel routing measures pursuant to the SOLAS Convention

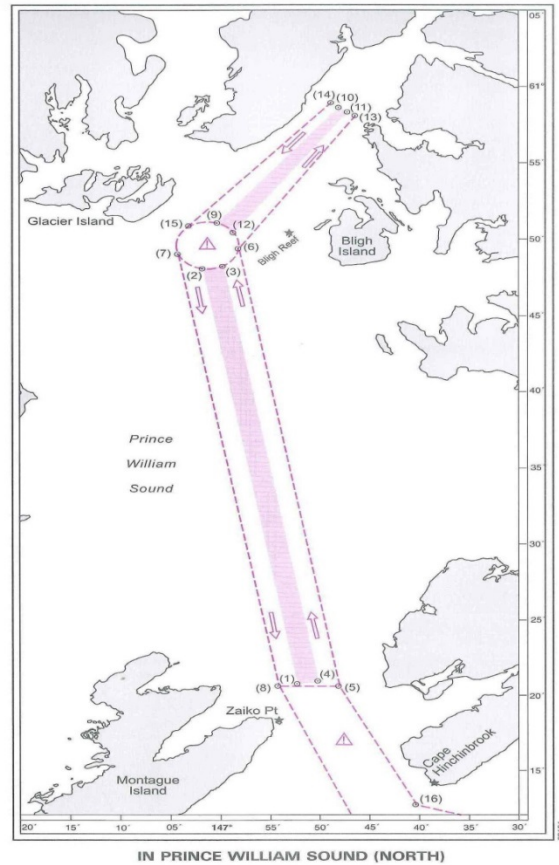
* Designation of Particularly Sensitive Sea Areas under IMO's *Guidelines for the Identification and Designation of PSSAs* (2005) where associated protective measures can be imposed such as vessel routing and areas to be avoided

- + Protective routing measures are very limited in Arctic waters
 - Off Northern Norway
 - * Traffic separation schemes and recommended routes established through IMO effective on 1 July 2007
 - * Tankers of all sizes and other cargo ships of 5000 gross tonnage and over engaged in international voyages are encouraged to navigate about 30 nautical miles from land



Source: COLREG. 2/Circ. 58 (2006)

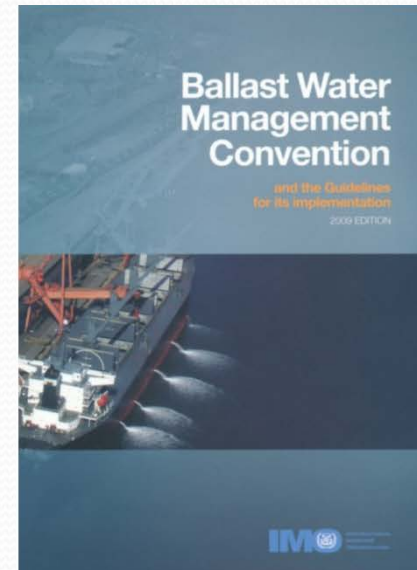
– Vessel traffic routing at the entrance to Prince William Sound, Alaska



(iii) Getting a firm grip on ballast water

Three key issues stand out in the quest to effectively control ballast water discharges in the Arctic

- Reaching full ratification of the Ballast Water Convention (BWC)
 - + As of 12 February 2015, the BWC had just received 44 ratifications representing 32.86% of world tonnage (Convention requires 30 ratifications representing 35% of world tonnage for entry into force)
 - + Only five of the Arctic States have ratified the Convention (Canada, Denmark, Norway, Russian Federation, Sweden)



- Ensuring timely Convention implementation
- + The phase-in of ballast water management systems (BWMS) by 2016 on various ships looks to be especially problematic with key constraints including costs, limited shipyard capacity and manufacturing capabilities on BWMS installations

http://img.nauticexpo.com/images_ne/photo-g/ballast-water-treatment-system-for-ships-190460.jpg



- + Various country reports to IMO on ballast water management systems have not been encouraging, e.g.
 - Japan's 2011 report to IMO (MEPC 63/2/17) showed a large majority of Japanese vessels have not yet installed BWMS, for example out of 1,196 ships having a ballast water capacity of greater than 5,000 (m³), only 27 were reported to have installed or ordered treatment systems
 - Sweden's report in 2012 (MEPC 64/INF.5) gave a similar gloomy picture showing that 93.6 percent of Swedish ships had not yet installed BWMS and that only 3.9 percent of those ships without treatment systems had placed orders for systems



+ In light of the implementation difficulties, the IMO's Assembly passed a resolution (A. 1088(28)) at its 28th session, 25 November-4 December 2013, easing the required application date for ballast water treatment systems according to a rather complicated schedule largely based on when first renewal surveys are due under MARPOL Annex I

● Understanding the operational efficiency of ballast water management systems in polar waters

+ Concerns have been raised over the ability of future ballast treatment systems to function in colder settings



+ The Arctic Council's Arctic Ocean Review (AOR) Report (May 2013) specifically encourages Arctic States to further research efforts into ballast water management systems that are effective in polar regions (Recommendation # 3)

(iv) Deciding whether to ban the use of heavy fuel oil (HFO)

- In light of the ban on the use or carriage of HFO on ships operating in the Antarctic Treaty Area (effective from 1 August 2011), the debate on whether HFO should be banned in at least some areas of the Arctic is not likely to go away



- + At the 65th of the MEPC in May 2013, the Committee endorsed the majority view that it was premature to regulate the use of HFO on ships operating in Arctic waters
- + The Committee also noted the view of some delegations that it might be desirable and possible to impose such regulations in the future
- + The Arctic Council's PAME Working Group has undertaken a study of HFO use in the Arctic and received the Phase II report at its meeting in Anchorage, Alaska, February 11-13, 2014



(v) Further addressing air emissions from ships

- Two air emission issues continue to be especially difficult within the IMO
- + Reducing black carbon emissions
 - Black carbon, emitted from ships through incomplete combustion of fuel, is a growing concern because of its climate warming potential (estimated to cause some 680 times or 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 particulate filters



- Since 2011, the IMO's Bulk Liquids and Gases Sub-Committee (now Pollution Prevention and Response) has been considering black carbon management options but consensus has not been reached on

- * Measurement methods
- * Control measures



+ Curbing greenhouse gas (GHG) emissions from ships

- While the IMO has adopted new regulations on energy efficiency for ships, possible additional measures on GHG emissions have been controversial
 - * Tensions over whether a common but differentiated principle should apply in the shipping context
 - * Debates over whether market-based measures (MBM), for example, applying a levy on fossil fuel use and setting emission reduction targets, should be adopted
- The MEPC at its May 2013 meeting agreed to suspend discussions of MBM issues to a future session

- Should one or more areas of the Arctic be designated as Emission Control Areas (ECAs) where more stringent air pollution controls for SO_x , NO_x and particulate matter might be imposed?



Conclusion

- Many other challenges relating to Arctic shipping governance hover on the horizon but no time to cover
- + Ensuring sustainable marine tourism development in the Arctic
- + Further addressing noise pollution from ships
- + Controlling the discharge of grey water from passenger vessels
- + Securing full implementation of the Polar Code
- + Ensuring adequate infrastructure to support safe and sustainable northern shipping



- One final nautical image captures the “bottom line” regarding law of the sea and ocean governance in the Arctic
- An unfinished voyage!

