Implementation of the Polar Code in Canada: Challenges and Opportunities

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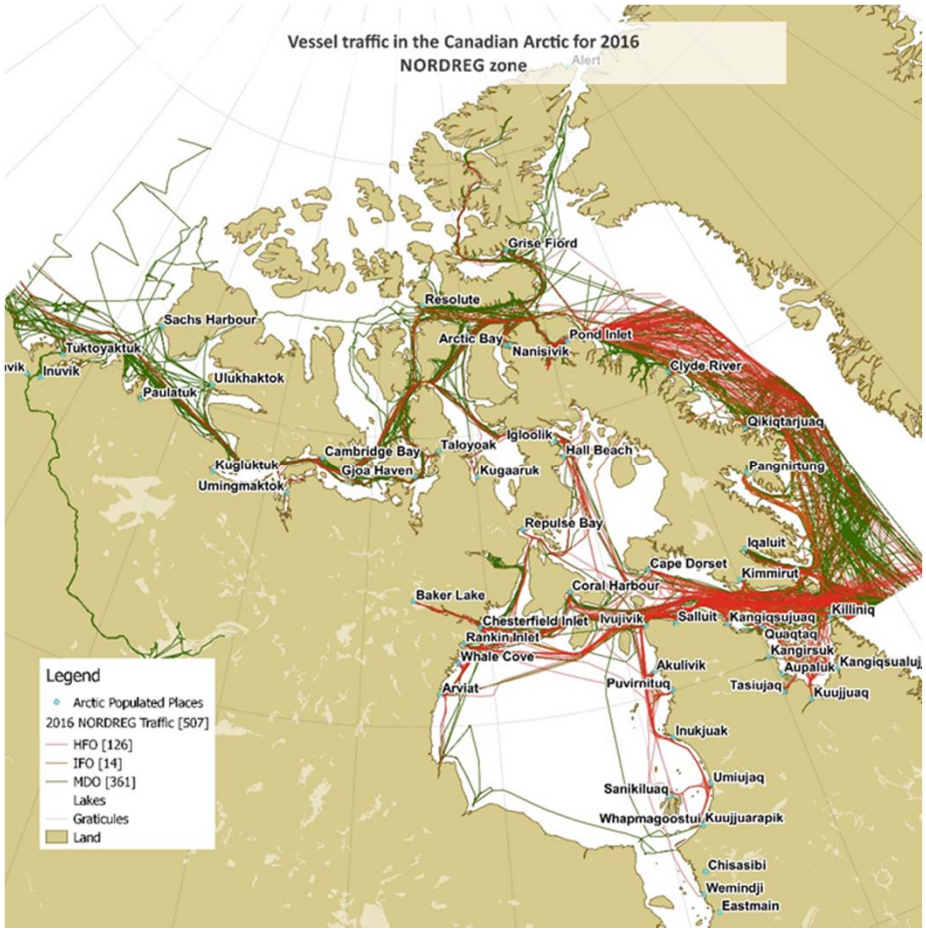
OBJECTIVES

- Provide an overview of maritime activity in Canadian Arctic waters;
- Highlight Canada's approach to the regulation and oversight of marine transportation in the Arctic, with emphasis on those provisions essential to increasing ship safety and the protection of the marine environment;
- Discuss recent efforts to bring the Polar Code into force in Canada through the *Arctic Shipping Safety and Pollution Prevention Regulations,* including the addition of unique Canadian requirements;
- Draw attention additional complementary safety and pollution prevention initiatives being pursued by Transport Canada in the Arctic Region.

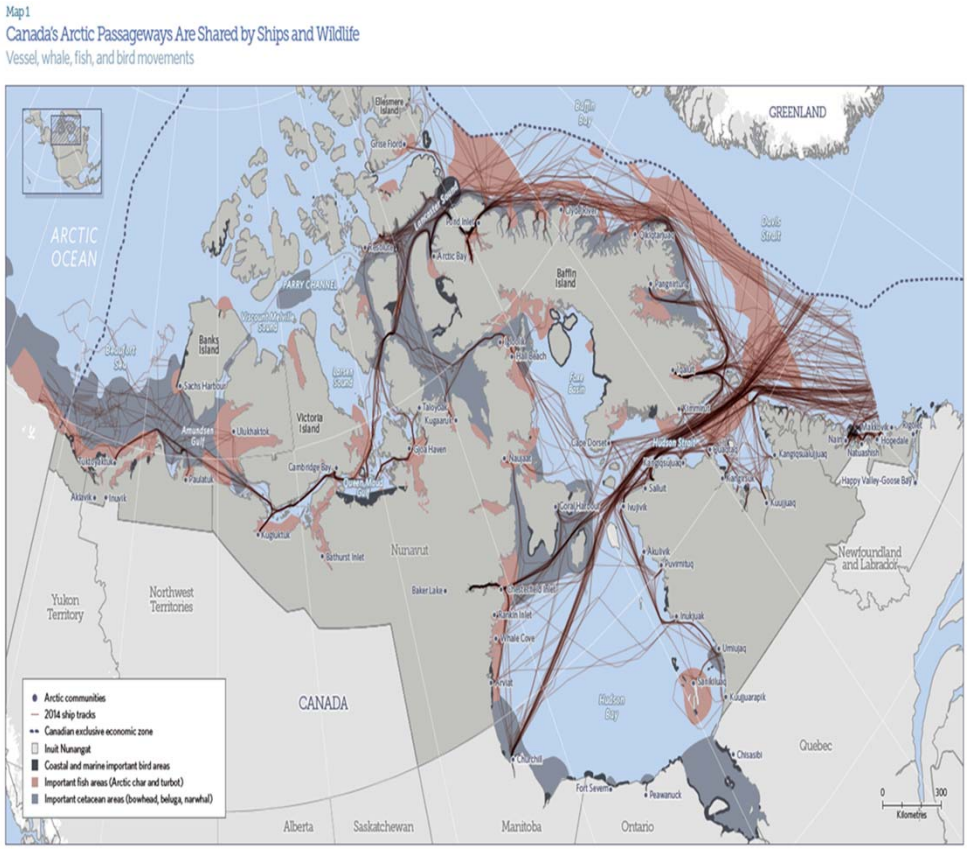
2016 VESSEL ACTIVITY IN CANADIAN ARCTIC WATERS



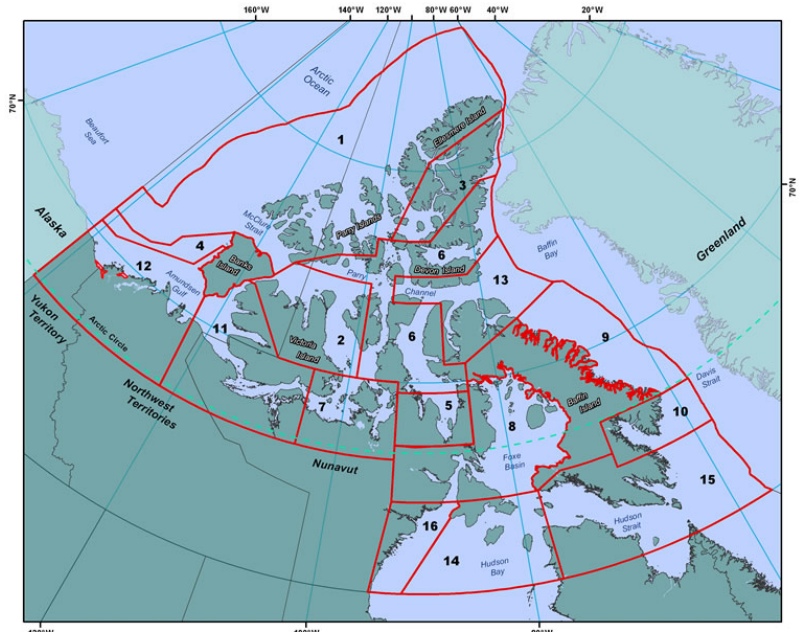
Vessel Type	#
Bulkers	22
Cruise Ships	17
Fishing	19
General cargo	24
Government	17
Pleasure Craft	28
Research	4
Tankers	5
Tugs/barges	19
Other	2
Total	**157**

CANADIAN ARCTIC SHIPPING ACTIVITY

- With few exceptions, predominately Summer traffic (July-September);
- Primarily destinational and not transit activity, and concentrated along Hudson Strat and Baffin Island;
- Examples of destinational activity include:
  community resupply, mining operation support (e.g. Raglan and Mary River), expedition tourism, scientific research, pleasure craft/adventurers, and fishing.
- In 2017, 34 vessels conducted transits of the Northwest Passage, virtually all of which were adventurers/pleasure craft, government vessels, or vessels conducting scientific research.



CANADA'S ARCTIC SHIPPING REGULATORY REGIME



Essential Legislation:

- **All of Canada**
  - *Canada Shipping Act, 2001*
  - *Marine Liability Act*
  - *Marine Transportation Security Act*

- **Arctic Specific**
  - *Arctic Water Pollution Prevention Act*
  - *Northern Canada Vessel Traffic Services Zone Regulations (NORDREG)*
  - *Shipping Safety Control Zone Order*
  - *Arctic Shipping Safety and Pollution Prevention Regulations* **(New - 15 December, 2017)**

ARCTIC SHIPPING SAFETY AND POLLUTION PREVENTION REGULATIONS (ASSPPRS)

The primary objectives of the Regulations are to:

- Introduce new safety and pollution prevention requirements through the application of the Polar Code to certain Canadian flagged vessels operating in Polar Regions;
- Ensure the continuation of existing levels of safety and pollution prevention currently applicable to certain vessels operating within the Canadian Arctic (e.g. complete prohibition of most discharges); and
- Modernize existing elements of the safety and pollution prevention regime for certain vessels operating in the Canadian Arctic and for Canadian flagged vessels operating in the Polar Regions.

CANADIAN "ADDITIONS" TO THE POLAR CODE

In addition to incorporating the Polar Code, the ASSPPRs introduce (or re-introduce) certain unique Canadian requirements, including:

- Three unique methodologies for determining ice operations:
- Low temperature notation (for Canadian flagged vessels built after January 1, 2017);
- Ice navigator qualifications for certain vessels not subject to SOLAS (e.g. fishing vessels);
- Stricter operational and structural pollution prevention measures than allowed under the Polar Code. Operational modifications include:
  - Complete prohibition of all discharges of oil (including cargo residues);
  - Treated sewage discharge requirements for vessels not subject to MARPOL Annex IV;
  - Garbage discharge requirements for vessels not subject to MARPOL Annex V.

IMPLEMENTATION – POLAR SHIP CERTIFICATES

- Transport Canada has amended its Recognized Organization (RO) Delegation Agreement to allow for the issuance of Polar Ship Certificates (PSC) onboard Canadian flagged vessels
- Vessel under non-Canadian flags must be issued a PSC by their flag administration or one of their RO
- The first issuance of PSC to Canadian flagged vessels will happen in the coming months, before the next arctic season

Canadian Flagged Vessels Requiring a Polar Ship Certificate (PSC)
***Based on 2017 NORDREG Statistics**

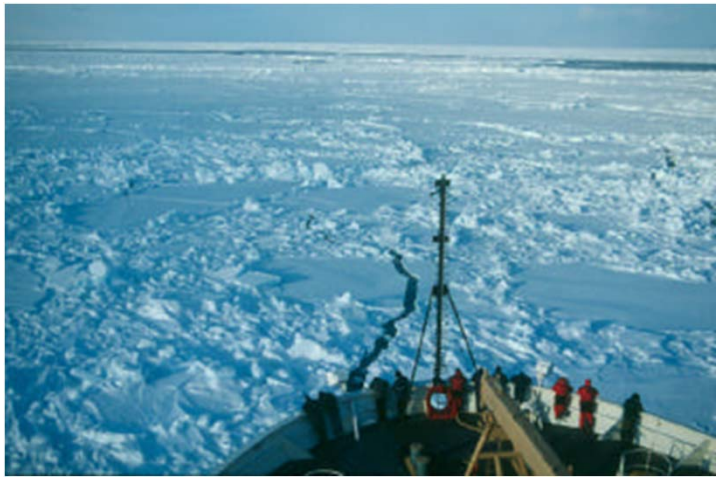
Vessel Type	Number of Vessels	Activity
General Cargo	15	Community Resupply
Tanker	8	Community Resupply
Tug	6	
Bulk Carrier	1	Mining Support
Projected Total	**30**	

Foreign Flagged Vessels Requiring a Polar Ship Certificate (PSC)
***Based on 2017 NORDREG Statistics**

Vessel Type	Number of Vessels	Activity
General Cargo	4	Community Resupply/Mining Support
Tanker	5	Community Resupply/Mining Support
Passenger Ship	12	Expedition Tourism
Bulk Carrier	25	Mining Support
Projected Total	**46**	

ICE INTERACTION METHODOLOGIES

- Under the ASSPPRs, vessels operating within the Canadian Arctic will have to follow one of the three available methodologies to assess operational capabilities and limitations in ice:
  - Zone Date System (ZDS)
  - Arctic Ice Regime Shipping System (AIRSS)
  - Polar Operational Limit Assessment Risk Indexing System (POLARIS)
- Canadian and foreign vessels of 300 GT or more may only navigate within SSCZ during the applicable period;
- A ship may operate outside the zones/dates prescribed in the SSCZ only under the following circumstances:
  - If a Polar Class vessel or a vessel built after 1 January, 2017, POLARIS must be used;
  - For all other vessels, either AIRSS or POLARIS can be used.

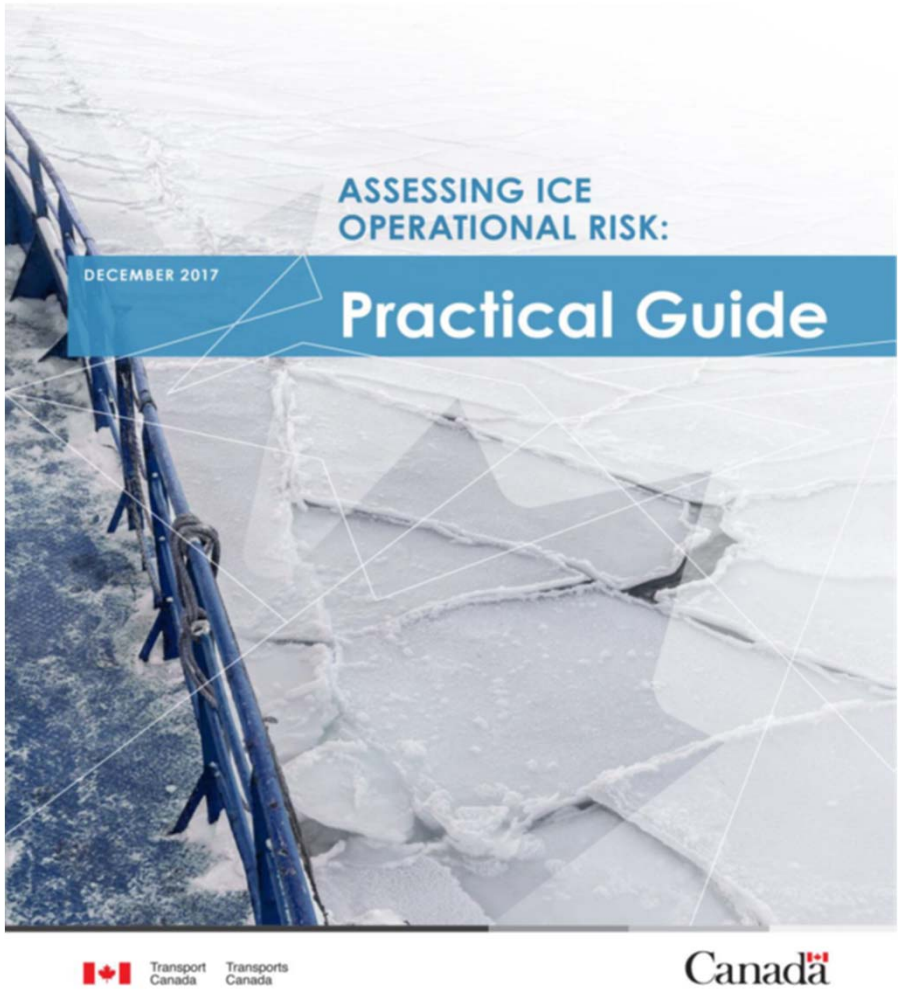


IMPLEMENTATION – TRAINING AND CERTIFICATION

- The Canadian *Marine Personnel Regulations* is currently under revision to implement the new Polar Waters Training and Certification Requirements.
- Until the coming into force of the amended *Marine Personnel Regulations*, the following interim measures have been put in place:
  - From July 1st 2018, Basic and Advanced certificate of Proficiency for personnel on ships operating in Polar Waters will be required for deck officers at operational and at management level; and
  - It will mandatory for all personnel on ships operating in polar waters to be familiarized with the procedures and equipment contained or referenced in the Polar Waters Operation Manual relevant to their assigned duties.
- Canada is also offering the transitional provisions allowed under the STCW amendments Regulation V/4. It is estimated that 80% of the Canadian Seafarers sailing into the Arctic yearly will have accumulated sufficient approved seagoing service to be eligible for the transitional provisions.
- The Marine Institute of Newfoundland is the first Canadian Marine College who has been granted approval to offer the new basic & advance training, available since February 2018.

IMPLEMENTATION – SUPPORTING DOCUMENTATION

- To support the implementation of the ASSPPR and the Polar Code, a number of existing Transport Canada policies and procedures will be amended, in addition to the creation of new material;
- The Arctic Ice Regime Shipping System Standard (TP 12259) has been updated and now also take into consideration the use of POLARIS when reporting sailing plan.
- Additionally, the existing *AIRSS Pictorial Guide* and the *AIRSS User Assistance Package* are being merged and updated with guidance on the use of ZDS, AIRSS and POLARIS. A revised version of the document is anticipated in spring 2018.



ARCTIC OVERSIGHT- MONITORING AND ENFORCEMENT

- TC maintains Duty Officers available 24/7 tasked with monitoring Canadian Arctic shipping on a daily basis via satellite and terrestrial AIS, and through operational summaries and ice messages provided by Canadian Coast Guard Ice Operations (via NORDREG);
- To verify compliance with the ASSPPR, the TC duty officers may be contacting the master of the vessel (via NORDREG), identified non-compliance could result in a compliance inspection (pursuant to the authorities of the *AWPPA* and *CSA, 2001*);
- Designated Port State Control (PSC) inspections may also be conducted in certain Arctic ports (e.g. Rankin Inlet, or near Arctic Churchill) and non-Arctic 'staging' ports (e.g. Halifax, St. John's, Quebec City).
- In Summer 2017, 9 Port Sate Control inspections where conducted in the Arctic (e.g. Iqaluit, Rankin Inlet and Cambridge Bay). Also 22 large domestic vessels received a visit from our inspectors in other Arctic Ports. 38 smaller vessels (e.g. Workboat, passenger and fishing) were also visited.

EXPECTED CHALLENGES DURING THE EXPERIENCE BUILDING PHASE

	Expected challenges for Canada	Mitigation measures in Canada
1	Operational Assessment (Polar Code I-A/1.5)	• Experienced Canadian Arctic operators • Various initiative (e.g. NRC Canadian Arctic Shipping Risk Assessment System (CASRAS), RO guidance)
2	Polar Water Operational Manual (PWOM)	• Experienced Canadian Arctic operators • Marine consultants with experience in Arctic Shipping
3	Polar Waters Training and Certification Requirements (CoP for Seafarers)	• Canadian officers and masters with Arctic experience • Canada has a pool of “independent” qualified officers available to be used as of a person other that the officers (Polar Code I-A/12.3.2)
4	IMO Standards for equipment in Polar regions (e.g. LSA, Navigational & Radio Communications)	• Ongoing work at the IMO NCSR and the SSE Sub-Committee.

ADDITIONAL CANADIAN ARCTIC SHIPPING INITIATIVES - OCEANS PROTECTION PLAN

Oceans Protection Plan

- Marine Infrastructure
- Low Impact Shipping Corridors

Cruise Ship Guidelines

- Facilitates the planning and execution of safe, secure, and environmentally responsible Canadian Arctic passenger ship operations.

Future/Ongoing

- Heavy Fuel Oil Mitigation Measures
- Underwater vessel noise and marine mammal avoidance
- Polar Code Phase II

THANK YOU

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