RESPONDING TO ARCTIC SHIPPING OIL SPILLS: RISKS AND CHALLENGES

An oil spill from Arctic shipping would devastate the environment and cause severe impacts on wildlife and local communities.

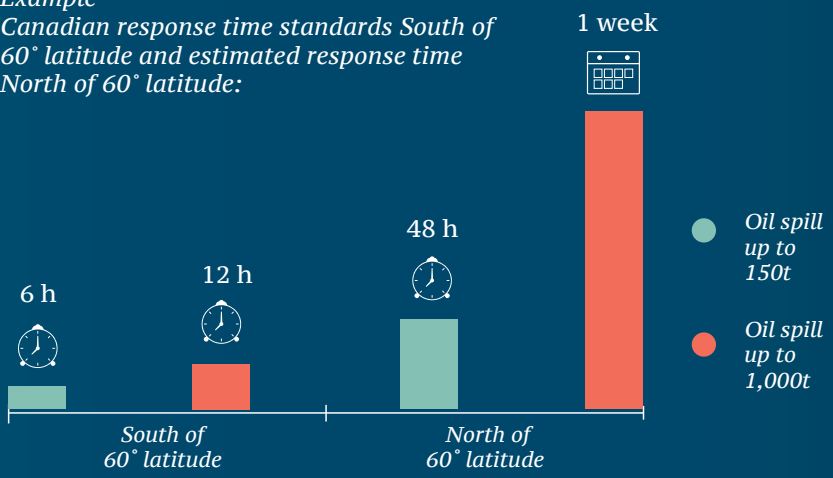
Oil spills from ships in the Arctic are nearly impossible to respond to and clean up. Why?

- Oil is difficult to remove from ice and snow
- Cold temperatures and poor visibility
- Remoteness, lack of infrastructure and equipment
- Inadequate storage and disposal facilities
- Challenging communications
- Lack of community response plans and trained responders

Severe weather limits the effectiveness of equipment and often prevents any response at all.

Mechanical recovery (skimmers or booms) of oil can be difficult in ice, use of chemical dispersants can damage essential food sources, and experience with in-situ burning in cold temperatures and ice involves only crude oils, as opposed to heavy fuel oil (HFO).

Example
Canadian response time standards South of 60˚ latitude and estimated response time North of 60˚ latitude:



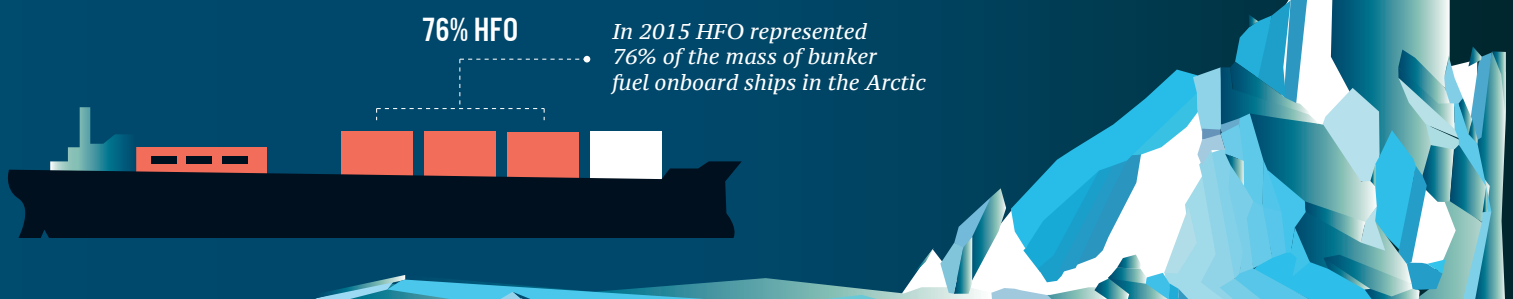
Coastal communities would be the first to respond, and have the most to lose.

Arctic communities depend on healthy and clean waters for much of their food.

Example
Approximately 50% of the Inuit diet in Canada is harvested from the land and waters:

Viscous Heavy Fuel Oil (HFO) is the fuel most used by large vessels. And the most damaging in case of a spill.

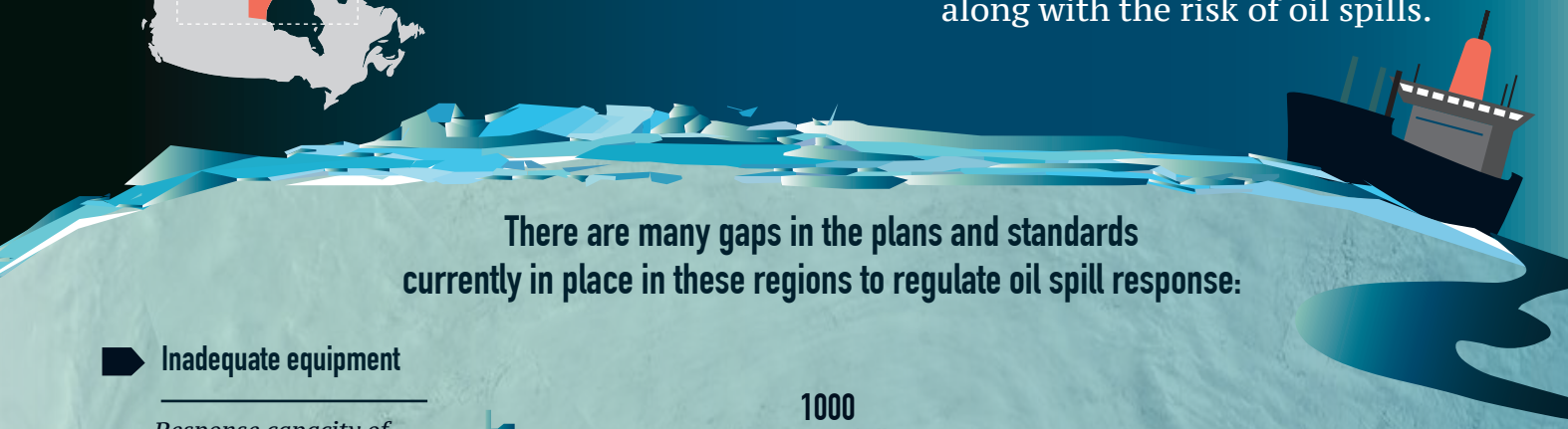
All response options become more challenging and mechanical containment and recovery may be the only means of responding to a spill of HFO.



OIL SPILL RESPONSE CAPACITY IN NUNAVUT AND THE BEAUFORT SEA, CANADA

Nunavut & Beaufort regions

Shipping in the Canadian Arctic is a dangerous and precarious endeavour. Yet, as sea ice melts, shipping is increasing, along with the risk of oil spills.

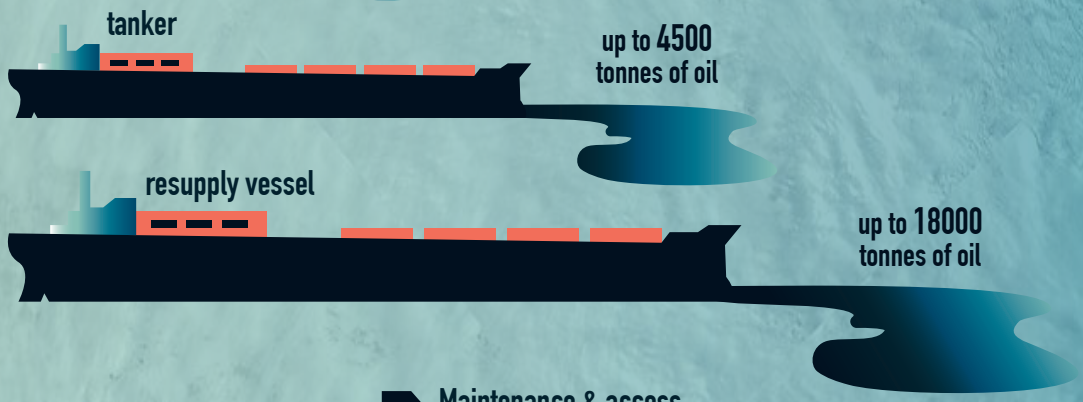


There are many gaps in the plans and standards currently in place in these regions to regulate oil spill response:

Inadequate equipment

Response capacity of the largest **equipment** *in the Arctic*

Capacity of **tankers** *and* **resupply vessels** *carrying fuel to Mary River Mine (Nunavut)*



National legal gaps

Ships travelling north of 60 degrees' latitude are only required to carry response equipment to handle a 1,000 tonne oil spill.

Maintenance & access

It is unknown whether the community packs containing basic equipment for small spills are functional and accessible.

Oil storage & disposal

No hazardous waste facilities exist in the Canadian Arctic. Oil cannot be removed from the environment if there is nowhere to store it.

Capacity

The number of trained responders in northern communities is limited.

Measures that can increase response capabilities and reduce the impacts of an oil spill in the Arctic

1. Ban the use of HFO as Arctic marine fuel
2. Introduce community spill response plans
3. Modernise equipment, communications and training
4. Engage communities in spatial planning of ship traffic

Sources: Guide to oil spill response in snow and ice conditions. Arctic Council, 2015; Oil spill response capacity in Nunavut and the Beaufort Sea, WWF Canada, 2017.

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