

Slide 1

BC Control Technologies & Operational Strategies

Banning Heavy Fuel Oil (HFO) in the Arctic

Dr Sian Prior

Arctic Under Threat Campaign
supported by the European Climate
Foundation

What is HFO?

- Residue and heaviest elements of refined oil
- Extremely viscous
- Breaks down very slowly in marine environment – tests showed that 90% of HFO remained after 20 days in the ocean
- In lab tests up to 50 times more toxic than medium and light crude oil spills to fish
- Oil trapped in ice can persist and travel longer distances

Risks associated with HFO

- Burning – harmful and significantly higher emissions for sulphur, nitrogen oxides and black carbon, PAHs and heavy metals
- Health impacts – inhaling BC – cardiopulmonary morbidity, respiratory problems, mortality
- Spills – risk of oiling and smothering wildlife and habitats, risk to local communities dependent on marine resources
- Sludge – 1 to 5% of the fuel volume consumed

Arctic Marine Shipping Assessment

“the most significant threat from ships to the Arctic marine environment is the release of oil through accidental or illegal discharge”

Recommended: Arctic States should “cooperatively support efforts at the International Maritime Organization to strengthen, harmonise and regularly update international standards for vessels operating in the Arctic”.

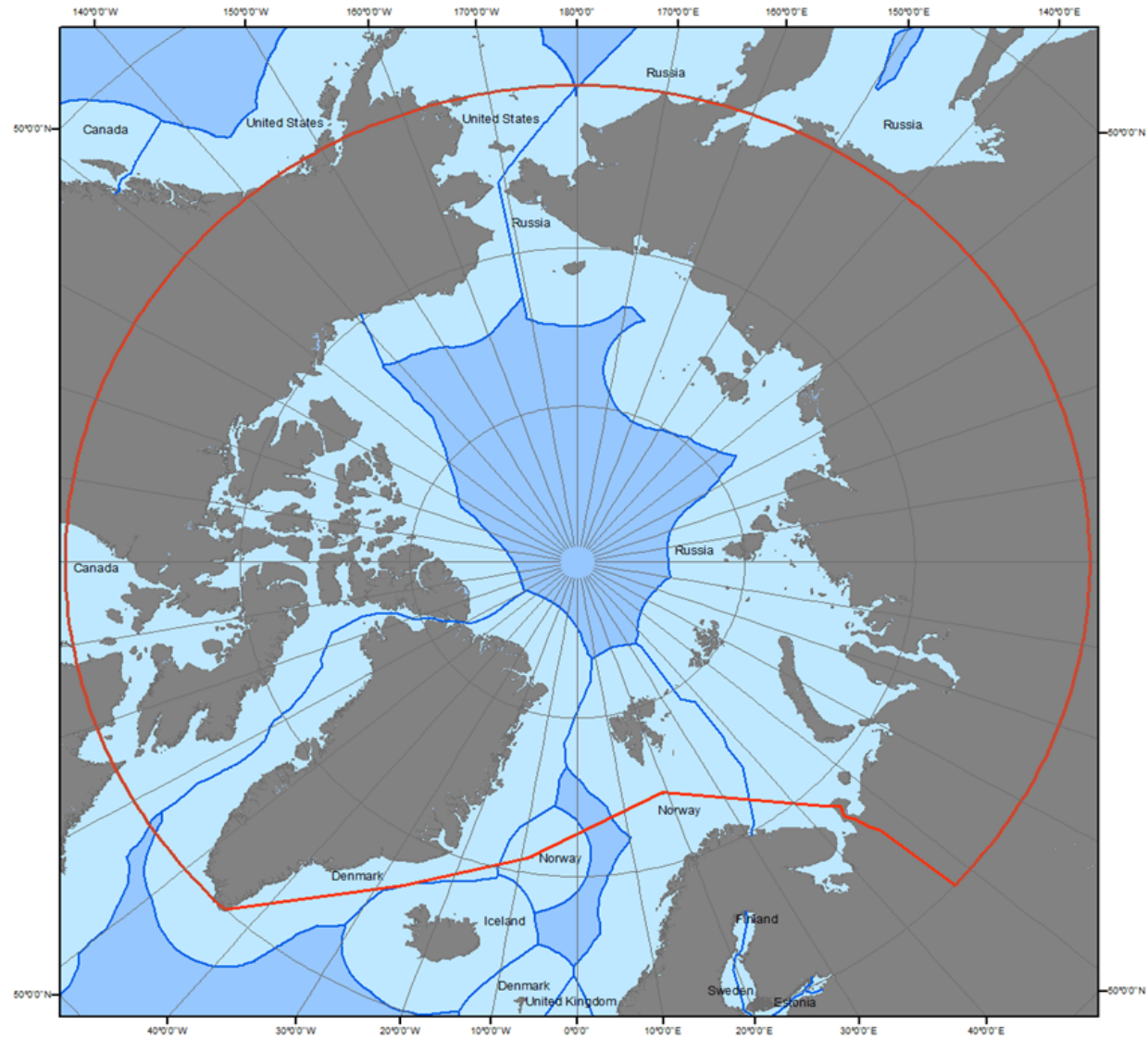
PAME

“in light of the particular HFO properties,
significant risk reduction will be achieved if the
onboard oil type is of distillate type rather than
HFO”

The Antarctic Case

- Risks of HFO in Antarctic recognised by ATMs
- Agreed to take action at IMO to ban HFO
- IMO – “hot potato” raised at MEPC -> BLG -> MEPC -> BLG -> MEPC
- New leadership with a solid proposal
- Amendment to MARPOL Convention
- Ballast water and further amendment (Mar 16)

Arctic Waters



HFO Use in the Arctic

- In 2012, 1347 ships operated in the Arctic
- Bulk carriers, tankers, cargo, container, and passenger vessels > 10,000 GT use HFO
- Majority of smaller vessels (e.g. fishing vessels) use distillate fuels
- Only 28% of vessels use HFO, however 75 % of total bunker mass was HFO
- Majority of ships are flagged by Arctic States
- By 2025, projected increase between 100 – 500% (US Arctic)

Mitigating the risks of HFO use (1)

Spatial measures

- Routing measures – e.g. areas to be avoided
- Emissions control areas
- Special Area / Particularly Sensitive Sea Area (PSSA)

Mitigating the risks of HFO use (2)

- Polar Code – comes into effect in 2017
- Amendment to the MARPOL Convention (aka Antarctic regulation)

Mitigating the risks of HFO carriage

- Routing measures – to keep vessels away from vulnerable sites or from danger
- Mandatory reporting – to facilitate faster response
- Amendment to MARPOL – ban or restricting the carriage

Political advocacy

- Arctic Council – 8 Arctic States plus observers
- UN International Maritime Organization (IMO)
- National policies

Engaging the private sector

- Cruise industry
- Fishing industry
- Container ships
- Bulk carriers
- Tankers
- Bunker suppliers
- Shippers
- Ports



"Crystal Serenity" sails around Alaska and the Northwest Passage in August 2016 with start in Seward, Alaska and final port call to be made in New York. Photo courtesy of Crystal Cruises

"I strongly believe in a big growth in cruise shipping in the Arctic," he said but called on international guidelines to limit the size of the vessels in northern waters.

Skjeldam was speaking to the audience at an Alaska-Norway Arctic roundtable in Arendal, Norway last week.

"Let's not wait for the others, let's be ahead of the development."

Daniel Skjeldam

He pointed to the importance of balancing the growth in Arctic tourism with sustainability.

«Sustainable Arctic tourism will benefit customers, companies and communities,» Daniel Skjeldam said and underlined that Hurtigruten will not wait for international guidelines and standards to come in place.

«Let's not wait for the others, let's be ahead of the development,» Skjeldam continued.


"There should be a ban on heavy fuel oil in Arctic waters," he said. "We will have to adopt to highest possible environmental standards."

Hurtigruten is the largest cruise liner operating in the Arctic with daily voyages along the coast of northern Norway and with expedition vessels sailing the waters off Svalbard, Greenland and Iceland.



Environmental NGOs calling for ban on HFO use in the Arctic

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🕒 Wednesday, 04 May 2016

NGOs call for Arctic HFO ban

👤 Written by **Ines Nastali**



CC/Coast Guard News

The EU's failure to push for a ban on the use by ships of heavy fuel oil (HFO) when operating in the Arctic has disappointed a group of eight environmental NGOs. However, they welcomed the European Commission's focus on climate mitigation and adaptation strategies and on protecting the environment in its new Arctic strategy.