

# Impact assessment and an Arctic HFO ban

In April 2018, the International Maritime Organization (IMO) committed to develop a **ban on HFO** for use and carriage as fuel **by ships in Arctic waters**, on an appropriate timescale, on the basis of an assessment of the impacts.

An impact assessment methodology should follow these **5 STEPS** (MEPC 73/9/2, Aug 2018):



## Define the problem

STEP 1

The most **significant threat** from ships to the Arctic marine environment is the release of oil through **accidental or illegal discharge** (a).



## Define policy objectives

STEP 2

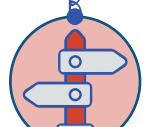
Develop measures to **reduce risks of use and carriage of HFO as fuel by ships in Arctic waters**, particularly with respect to environmental damage associated with HFO spills (MEPC 71/17, October 2017).



## Develop policy options

STEP 3

Given the clear direction taken by the IMO (MEPC 72/17, April 2018), the policy objective under consideration is how to best **implement a ban on the use and carriage of HFO** for use as fuel by ships operating in the Arctic, based on the outcome of an impact assessment.



## Analyze impacts

STEP 4

Identify and assess the **economic, environmental, and social implications** of a ban of HFO for use and carriage as fuel by ships in Arctic waters.



## Recommend a policy option

STEP 5

Given the clear policy direction, and the fact that a tried and **tested methodology for an impact assessment is widely available** and most of the elements of an impact assessment have already been undertaken, work to **develop a new regulation to ban the use and carriage of HFO** as fuel by ships operating in the Arctic should commence.



# Focus on Step 4: Analyze Impacts

## Environmental Impacts



The first of four multi-phase reports published by the Arctic Council concludes that... using distillates instead of HFO as fuel would achieve significant spill risk reduction (b).

**RISKS**

An incident resulting in **1 oil spill in the Arctic** could be expected every **1.6 years\*** (c).

\*based on 2012 shipping levels

**THREAT**

The **consequences of HFO spills** could be prolonged because of its persistent nature, and the threat to marine life and economically sensitive resources can **last longer** in the event of a HFO spill\* (d).

\*based on a review of problems posed by HFO spills

## Economic Impacts



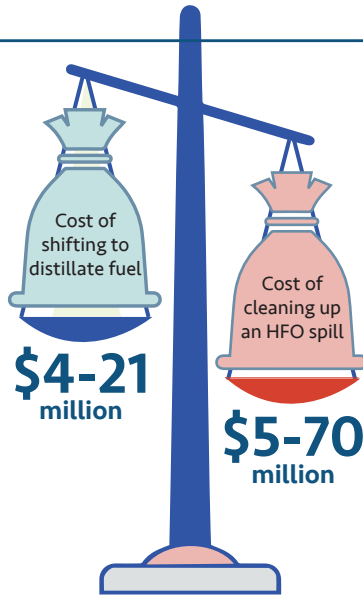
### Costs associated with HFO ban (e)

**Arctic fleet's fuel expenditure** +3-18% in 2021

**Costs for a ship** operating on low sulphur HFO +2%  
or using HFO in combination with a scrubber to comply with the global sulphur cap. +4-15%

**Average import and export price of goods** in Greenland +0.2% to 0.5%

Cost of food shipped to Iqaluit in North Canada +0.2%  
Cost for dry cargo shipped through Arctic Sealift operations in Canada (f) +1%



**There is no correlation between fuel costs and food prices:** in Nunavut fuel oil prices fell nearly 65% in 2014-17, but the average cost of select shelf-stable food items in communities increased by about 15% (h)

### Costs associated with a HFO spill (g)

#### Case-study

In August 2007 IMC Shipping (operators of the MV Selendang Ayu) reached a financial settlement with the State of Alaska for the spilled oil damages. It was agreed that the total payout would be **\$112 million**, which included:

**Formalized response** over \$100 m

**Criminal penalties** (fines) \$9 m

**Clean-up costs** to the State of Alaska \$2.5 m

**Wreck removal and lost taxes** (fishing) \$844,707

**Beach monitoring** \$36,000

## Social Impacts



We are constantly reminded how taking action on greenhouse gas emissions will negatively impact our economy ... which is a very outdated card to play at this stage with our climate crisis. I would say do not play this card when it comes to banning HFO which has potential to create extreme irreparable damage to our Arctic oceans ... and I repeat the oceans are the life force and source of life for us as Inuit of the Arctic.

Sheila Watt-Cloutier, Environmental and Human Rights Advocate

Sources:

(a) Arctic Marine Shipping Assessment, Arctic Council 2009  
 (b) Det Norske Veritas, 2011. Heavy fuel in the Arctic – Phase 1  
 (c) Det Norske Veritas 2013. HFO in the Arctic – Phase 2  
 (d) Ansell et al., 2001. A review of the problems posed by spills of heavy fuel oils. ITOPP  
 (e) Nelissen, D. & Tol, E., Residual bunker fuel ban in the IMO Arctic waters, CE Delft, 2018  
 (f) Vard, Marine Inc., Arctic Fuel Switching Impact Study, 2016  
 (g) Deere-Jones, T., Ecological, Economic and Social Impacts of Marine / Coastal Spills of Fuel Oils (Refinery Residuals), 2016

(h) DeCola, et al., Phasing Out the Use and Carriage for Use of Heavy Fuel Oil in the Canadian Arctic: Impacts to Northern Communities, Nuka Research and Planning Group, 2018.

Other reading:  
 Roy, B. & Comer, B., Alternatives to Heavy Fuel Oil Use in the Arctic: Economic and Environmental Trade-Offs, International Council on Clean Transportation, 2017