Clean Arctic Alliance response to:

Call for input on the impacts of toxics on Indigenous peoples

1. Introduction

The Clean Arctic Alliance (CAA) has previously provided input on toxics and human rights to the impact analysis of the International Maritime Organization (IMO). Since the Clean Arctic Alliance focus is on the impact of shipping on Arctic wildlife, ecosystems, and Inuit and local communities, much of the material we input previously is relevant in the context of the impact of toxics on Indigenous peoples and is repeated or drawn from our previous submission.

Involvement of representatives of Indigenous communities in international negotiations on matters of direct consequence to their food security, safety and livelihoods should be non-negotiable. The rights of Arctic Indigenous communities to a clean and sustainable environment must be respected, and all UN agencies, including the IMO must take the protection of Arctic ecosystems, Arctic peoples and wildlife seriously. The Arctic, and what Inuit call Inuit Nunaat, is changing rapidly with the loss of the summer sea ice which not only allows for greater access to the Arctic and its resources by ships and maritime industries, but it also lengthens the period of time over which ships can operate in the Arctic. These activities drive an increase in the risks to the Arctic and Inuit Nunaat, its communities (including their health, livelihoods and food security) and its wildlife - risks of heavy fuel and distillate oil spills, and increased threat from black carbon emissions, underwater noise, and discharges of scrubber wastes along with sewage, greywater, and marine plastics. (See At Risk: Russia's Indigenous Peoples Sound Alarm On Loss of Arctic, Traditional Way of Life .)

2. Marine pollution, including oil pollution

The Arctic and heavy fuel oil

The use and carriage of heavy fuel oil by ships operating in the Arctic poses an immediate risk to Indigenous communities and their food security from spills, and threat to ecosystems, wildlife, and community health, subsistence, and livelihoods from black carbon emissions. Heavy fuel oil is a dirty and polluting fossil fuel that powers shipping throughout the world's oceans - accounting for 80% of marine fuel used worldwide. Around 80% of marine fuel currently carried in the Arctic is HFO, over half by vessels flagged to non-Arctic states. If HFO is spilled in cold polar waters, it breaks down slowly, proving almost impossible to clean up and would have long-term devastating effects on

Arctic indigenous communities, livelihoods and food security due to the impact on the marine ecosystems they depend upon. There is evidence that new blends of low-sulphur heavy fuel oils may be even harder to clean up than conventional HFO making the risks greater (SINTEF, 2020).

Over twenty years ago, in Ansell D.V. et al., 2001 for the International Tanker Owners Pollution Federation Ltd concluded that the consequences of HFO spills could be prolonged because of the persistent nature of HFO and the threat to marine life and economically sensitive resources could last longer in the event of a HFO spill. While over twelve years ago, the Arctic Council published its first Arctic Marine Shipping Assessment Report (AMSA, 2009) which found that "the most significant threat from ships in the Arctic marine environment is the release of oil through accidental or illegal discharge…". Subsequent work undertaken by Det Norske Veritas and published by the Arctic Council in 2011 concluded that using distillates instead of HFO as fuel would achieve significant spill risk reduction. Recognising the risks associated with a spill, the IMO banned the use and carriage of all heavy grade oils (i.e. both fuel and cargoes) from Antarctic waters in 2011. Despite similar sensitivities and greater vulnerability (more vessels operate in the Arctic), securing a similar ban to protect wildlife and communities in the Arctic has proved challenging. In 2018, eight IMO Member States, recognising the risks associated with the use of HFO in the Arctic, submitted a proposal to the IMO stating: "A single HFO spill could have devastating and lasting effects on fragile Arctic marine and coastal environments. In addition, Arctic shipping is projected to continue to rise, thus increasing the risk of a spill. For these reasons, the ban on HFO should be implemented as soon as possible, and any delay in implementation of the HFO ban by eligible ships should be short-lived." The co-sponsors proposed that the implementation date of the ban should be set no later than the end of 2021.
Despite the evidence of the need for a ban on HFO use and carriage in the Arctic because of the potential impact on Indigenous communities, the precedent set in the Antarctic, and in the waters around Svalbard, and alternative fuels being immediately available, there will be a delay until 2029 in implementation of a full HFO ban in the Arctic. Studies show that the current draft HFO ban will deliver little in terms of restricting HFO use in the Arctic when it first takes effect in July 2024. 74% of Arctic shipping will be able to continue with business as usual until July 2029, when the ban should become fully effective. In addition, the total amount of HFO used and carried in the Arctic is likely to increase, due to increasing Arctic shipping and utilisation of various exemptions, waivers or changes of flag. Norway has unilaterally introduced a ban in all waters around the island archipelago of Svalbard from January 2022.

Fuel quality and composition of low sulphur HFO blends

Indigenous communities worldwide are dependent on a clean, safe environment. Fuel quality and composition of marine fuels can have a serious impact on the environment and on health or consequences for maritime safety and engine function. The issue of fuel quality and the need for fuel standards was raised by Friends of the Earth International in 2007 (BLG 12/6/12) along with a submission with proposals for development of holistic approaches to manage impacts of heavy fuel oil (BLG 11/5/16). Presently the only component of fuel that is regulated by the IMO is sulphur. The regulation for lowering the sulphur content of all fuel oils to 0.5% came into force in January 2020 which has led to new fuel blends coming available on the market to meet the new standard for lower sulphur content. These new Very Low Sulphur Fuel Oils (VLSFOs) were developed explicitly to meet the requirements of the 2020 sulphur cap. The properties of these fuels were not tested in advance for their environmental impact (emissions of black carbon or impact if spilt) prior to release on the market. In February 2020 Germany and Finland submitted a paper to the Pollution Prevention and Response sub-committee of the IMO presenting data that showed some new blends of VLSFOs have higher than expected black carbon emissions due to the aromatic content. The CAA has called for information on fuel characteristics to be made publically available in order to prevent adverse environmental impacts. The issue of aromatic content of fuels has been referred to the International Organisation for Standardization (ISO) which is a body made up of national standards bodies, which tend to be representatives of industry and with no environmental NGO access. An international nongovernmental organisation like ISO should not be the only place where the composition of maritime fuels is addressed.

The Wakashio disaster off the coast of Mauritius in 2020 is the first large VLSFO spill and provides some indications of how this fuel would behave if spilled in the Arctic. There is an ongoing investigation into this disaster and there are many unanswered questions surrounding the fuel onboard the vessel and the toxicity to the environment. However, there is a suggestion in a series of Forbes articles that the fuel composition and quality may have played a role in the disaster by causing engine malfunction. There also appears to be a lack of transparency and as yet there have not been any independent tests conducted on the fuel onboard the vessel. Prior to these fuels being used by the shipping industry there were no publicly available studies on the impacts of VLSFO spills in the environment.This nature article says that fishing communities living in the region can no longer fish, because the fish that have been caught since the accident contain high levels of arsenic. This highlights the very real risks to fishing and indigenous communities worldwide to shipping disasters.

This is a major regulatory gap and the need for fuel quality regulation including setting of standards is required and should be based on the application of the precautionary approach, ahead of new fuels being released onto the market.

3. Chemical pollution, including hazardous substances, garbage, and sewage

The 2020 cap on the sulphur content of marine fuels allows for ships to meet the regulation in several different ways. One compliance mechanism is the use of Exhaust Gas Cleaning Systems, also known as scrubbers. Scrubbers essentially remove the sulphur from the exhaust gases using seawater and a filter and store the waste on board or discharge overboard. The discharge of scrubber effluent poses new threats to all waters including in the Arctic and to Indigenous communities. Analysis of scrubber effluent shows that the waste contains toxic chemicals which have the potential to bioaccumulate and biomagnify through the food chain. This poses particular risks to mammals at the top of the food chain including cetaceans and humans.

Further information on the risks posed by scrubbers can be found in the following documents.

1) EU Scrubbers Report: Closing the loop Report, submitted to IMO MEPC 75/INF.10
2) ICCT scrubber report.

An important step would be to ban the use of scrubbers in the Arctic and to designate Arctic waters as a 'no dumping region'. For Arctic shipping this means that in addition to 'no plastics', no garbage and 'no oil' (as required under the MARPOL Convention), there should be no dumping of scrubber discharge water. This is essential to protect marine biodiversity and the Indigenous communities dependent on marine resources from pollutants as well as to prevent bioaccumulation and biomagnification of toxics such as polyaromatic hydrocarbons (PAHs) and heavy metals through the food web.

[1] https://www.nature.com/articles/s43247-020-0001-2

4. Black carbon

The polar regions are at the front line of climate heating and over the past 30 years, the Arctic has warmed at three times the rate as the entire globe, a phenomenon known as Arctic amplification.This Arctic heating is leading to loss of ice and breakdown of ice sheets which in turn is opening the region to increases in marine traffic. In June, temperatures north of the Arctic Circle reached 38°C (100.4°F), the highest temperature ever recorded in the Arctic. Arctic dynamics have long-term regional and global impacts, including accelerated warming due to loss of sea ice reflectivity, weather pattern disturbances, sea-level rise, and tidal and storm surge events[1]. Arctic Indigenous

communities and peoples are living on the front line of these changes and the implications for their culture, livelihoods and food security are immense.

The increase in Arctic and near-Arctic shipping poses a particular threat to the region through the emissions of black carbon (BC) particulates which results from the combustion of fossil fuels of which HFO produces the highest levels of BC particulates. BC is a small, dark particle that absorbs sunlight and heat, warming the atmosphere and melting snow and ice when it falls to the ground. Black carbon, while not a climate gas, is a short-lived climate forcer – the strongest light-absorbing component of particulate matter, and is a critical contributor to human-induced climate heating, especially in the Arctic where the impact of BC emissions is magnified because of the proximity of snow and ice.

Black carbon also has a negative impact on human health, including respiratory diseases and premature death. Black carbon consists of very fine, partly carcinogenic particles, which are small enough to enter the bloodstream and reach other organs.

Ship emissions account for a growing share of BC. Today, BC accounts for 21% of CO2-equivalent emissions from ships, making it the second most important driver of shipping's climate impacts after carbon dioxide. Arctic communities living close to shipping lanes and ports are at greater risk from Arctic shipping black carbon emissions due to their proximity to the source, but currently there are no international regulations that directly limit black carbon emissions from ships.

Between 2015-2019 BC emissions from Arctic shipping increased by 85%. The current proposed ban on the use and carriage of HFO in the Arctic (to reduce spill risk) is so weak it would only reduce black carbon emissions by 5%.

Arctic Council members have already committed to an ambitious target to reduce BC emissions by 25 - 33% below 2013 levels by 2025 and are anticipated to establish a new ambitious reduction target in 2023. Because of its close and at times, immediate proximity to sea ice, shipping BC emissions represent a special threat to Arctic sea ice, snow and the Greenland ice sheet, because a near-entirety of these emissions will deposit on ice and snow, and therefore have a 4-10x greater warming impact than BC emissions that remain airborne. The Arctic Council therefore has urgently called on Arctic operators to develop and report on measures and best practices to reduce particulate matter and BC emissions including from shipping[1]. The LRTAP Convention similarly is looking at BC emissions in relation to the next revision of the Gothenburg Protocol.

Currently however there are still no international regulations that directly limit BC emissions from ships in or near the Arctic or globally. A switch to distillate fuel would reduce BC emissions by around 44% and the installation of particulate filters could reduce black carbon emissions by over 90%. Alternatively the use of non-fossil fuels or other methods of propulsion could eliminate BC emissions from ships.

5. Climate heating, acidification and toxic algal blooms

The remaining region of multi-year ice west of Greenland, on which many Arctic species depend, has deteriorated significantly in the past two years. Loss of sea ice and warming waters have led to plankton blooms and regions of low oxygen, that together with growing acidification (which occurs faster in cold Arctic waters than anywhere in the glove) threaten vital fisheries such as cod west of Norway, and Icelandic lobster.

[1]
ACMMCA09_Iqaluit_2015_SAO_Report_Annex_4_TFBCM_Framework_Document.pdf (arctic-council.org)