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REDUCTION OF THE IMPACT ON THE ARCTIC OF BLACK CARBON EMISSIONS FROM INTERNATIONAL SHIPPING

Comments on document PPR 10/6 with regard to the reduction of the impact on the Arctic of Black Carbon emissions from international shipping

Submitted by Inuit Circumpolar Council (ICC)

SUMMARY

Executive summary:	In this document, the Inuit Circumpolar Council (ICC) emphasizes areas of particular interest to the ICC and the need to develop mandatory and concrete measures to urgently reduce Black Carbon emissions from shipping in the Arctic and Inuit Nunaat.
Strategic direction, if applicable:	3
Output:	3.3
Action to be taken:	Paragraph 18
Related documents:	Resolution MEPC.342/77; PPR 7/8/2, PPR 7/22; PPR 8/5, PPR 8/INF.3; MEPC 75/7/15, MEPC 75/10/6; MEPC 77/16, MEPC 77/16/Add.1; MEPC 78/7/18 and MEPC 78/7/27

Background

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of the document on *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.4) and comments on document PPR 10/6 (Denmark). The present document flags the need to develop mandatory and concrete measures to urgently reduce Black Carbon (BC) emissions from shipping in the Arctic and Inuit Nunaat.

2 Resolution MEPC.342(77) urges Member States and ship operators to voluntarily use distillate or other cleaner alternative fuels or methods of propulsion that are safe for ships and could contribute to the reduction of BC emissions from ships when operating in or near the Arctic. MEPC 77 also provided updated terms of reference to the PPR Sub-Committee to undertake further work to reduce the impact of BC emissions on the Arctic.

3 Important and relevant sections of resolution MEPC.342(77) emphasize the following:

.1 that BC is a potent short-lived contributor to climate warming and its contribution to shipping CO_2 was incorporated in the Fourth IMO GHG Study 2020; and

.2 that emission factors used in the Fourth IMO GHG Study 2020 show that, when used in the same engine, a switch to distillate significantly reduces BC emissions per kilogram of fuel consumption.

4 The Correspondence Group (CG) on the Prevention of Air Pollution from Ships, which ICC actively participated in, was established by PPR 9 and was instructed to: further consider regulating or otherwise directly control BC emissions from marine diesel engines (exhaust gas) to reduce the impact on the Arctic of BC emissions from international shipping, taking into account the identified candidate control measures (PPR 6/20/Add.1, annex 9), other relevant documents and views expressed. To a certain degree, ICC's comments have been reflected in the report and work of the CG. However, there is a need to underline critical issues for ICC, Inuit, and other people who live in Inuit Nunaat and the Arctic.

Black Carbon impacts on Inuit Nunaat

5 As IMO's first Indigenous observer, Inuit feel the weight of how disproportionately climate change impacts Indigenous people and communities throughout the world. ICC can speak to how severely the climate crisis impacts the Arctic Inuit homeland, Inuit Nunaat.

6 Inuit Nunaat is warming three to four times faster than the rest of the planet. Alarmingly, Arctic sea ice has declined by about 72% between 1979 and 2016 in the month of September. Ice itself is a habitat which sustains wildlife; it is a highway, the transportation route for Inuit, enabling the economies and travel, and is a link to cultural identity for Inuit; it plays a critical role in regulating the world’s climate. A warming Arctic is connected to the climate emergency and biodiversity crisis, with social and cultural impacts for Inuit.

7 As the IPCC Sixth Assessment Report has outlined (Working Group II, February 2022), to which ICC is a contributor and expert reviewer,:

.1 loss of ecosystems and their services has cascading and long-term impacts on people globally, especially for Indigenous Peoples and local communities who are directly dependent on ecosystems, to meet basic needs;

.2 rapid warming and extreme temperatures in the Arctic are leading to unprecedented seasonal sea ice loss, permafrost thaw, and increasing ocean temperatures. Cascading from these biophysical changes are cultural, socio-economic and political consequences that are widespread and largely unprecedented in human history; and

.3 changes in the Arctic are more pronounced than elsewhere and portend climate change impacts in other areas of the globe.

8 Indigenous Knowledge (see definition in document SDC 9/WP.3) from the Arctic region has also documented major changes to weather, wildlife migration, snow and sea ice, as well as the introduction of new species. These changes have unprecedented and significant impacts on people in the Arctic, especially Indigenous communities who are on the frontlines and experience impacts of severe weather changes, and whose cultural foundation and livelihoods thrive on the very nature of the Arctic environment of cold, snow and ice. Every day, Arctic communities are witnessing a climate in crisis.

9 There are immediate human health consequences of being exposed to BC emissions: premature death in people with heart or respiratory disease, non-fatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, increased respiratory symptoms such as irritation of the airways, coughing or difficulty breathing. For Arctic communities and Indigenous Peoples, this exposure can significantly affect the quality of life and community well-being, adding hardship to already climate-vulnerable communities in the north.

Black Carbon emission trends

10 BC, a short-lived climate forcer, is 20% of shipping's CO_2e emissions (IMO Fourth GHG Study), which clearly has a disproportionately high impact in the Arctic. BC absorbs heat and melts ice and snow, which results in severe consequences for wildlife and people in the Arctic. BC can destroy ice and snow wildlife habitat, endangering subsistence species that Inuit rely on and endangering biodiversity at large. From 2015 to 2019, Black Carbon emissions from ships operating within Arctic waters increased by 85 %(see https://theicct.org/fit-for-55-black-carbon-from-ships-aug22/). The Arctic Council's Arctic Monitoring and Assessment Programme report (see https://www.amap.no/documents/doc/amap-assessment-2015-black-carbon-and-ozone-as-arctic-climate-forcers/1299) concluded that BC emitted within the Arctic is likely to have five times the warming impact as that of BC emitted in mid-latitudes, which is also reflected in the Sand et al. 2013 study.

The importance of a large enough geographic scope

11 BC that is emitted beyond the Arctic can have significant impacts on both, the Arctic environment and Arctic communities. It is for this reason that resolution MEPC.342(77) states "...ships when operating in or near the Arctic." Atmospheric drift of BC beyond the Polar Code region must be taken into account to reduce Black Carbon impacts within the Polar Code region. ICC suggests the scope of the PPR Sub-Committee's work consider the use of the Arctic Council's Arctic Human Development Report (see https://oaarchive.arctic-council.org/handle/11374/51) geographic area because of its expanded boundaries and inclusion of a wider range of ship transits.

Equitable transition

12 A just and equitable transition must align with the United Nations Declaration on the Rights of Indigenous Peoples, recognizing and implementing Indigenous rights and considering Indigenous self-determination and self-governance. It also must include the recognition of disproportionate impacts from both direct climate change effects and economic implications of measures to mitigate those effects. In the context of BC emissions reductions, marine fuels are available immediately that could dramatically reduce emissions which could have higher costs for ship operators and owners and the costs of goods in Indigenous communities. An equitable transition in this case is ensuring any increased costs for the use of less polluting fuels aren't passed on to disproportionately affected climate vulnerable Indigenous communities.

Solutions

13 Switching away from heavy fuel oils to alternatives like distillate fuel can reduce BC emissions between 50% - 80% (see https://theicct.org/fit-for-55-black-carbon-from-ships-aug22/), which would have immediate effect on local heating and snow/ice melt, and the health of people living in the Arctic.

14 During the CG, ICC suggested three areas of prioritized work to respond to the urgency of the impact on people and the environment from BC emissions in and near the Arctic:

.1 Mandatory fuel measure: Develop, without delay, a mandatory measure in line with the existing resolution, MEPC 342(77) to immediately switch to distillate or cleaner alternative fuels in or near the Arctic. A likely approach would be to codify the resolution in an amendment to MARPOL. Any measure would need to strongly advise States to mitigate potential increased costs to indigenous communities, and to include a broad enough geographic boundary which takes into account atmospheric drift of BC pollutants.

.2 Emission Control Areas (ECAS): Support and encourage the establishment ECAs throughout the Arctic. The establishment of a new correspondence group at PPR 10 could compile data, research, perspectives, and country-specific materials to aid in state ECA development. The impacts of BC emissions on human health would be of particular relevance to Inuit.

.3 Speed reduction: To support health-related outcomes and a reduction in Arctic ice melt, call for speed optimization and reduction in areas where Inuit communities could benefit from reduced air emissions and BC pollution. This could be implemented through a new regime embedded in the Polar Code or by speed restrictions as an Associated Protective Measure within the designation of an Arctic PSSA (Particularly Sensitive Sea Area). Speed reduction and optimization can have co-benefits such as lower marine mammal strikes and disturbance, and underwater radiated noise, all of which are important stressors to minimize for healthy Inuit communities and their dependence on the sea for food and culture.

Proposal for next steps

15 As identified during discussions in the CG, delegations expressed support for using resolution MEPC.342(77) as a basis for the development of a mandatory measure. Document MEPC 79/5/5 (FOEI et al.) could be a basis for this measure. ICC therefore suggests the Sub-Committee include the discussion of a new MARPOL regulation, based on suggestions in document MEPC 79/5/5, in the terms of reference for the working group proposed by the CG at PPR 10.

16 In light of the requirement of the Sub-Committee to further mitigate BC from shipping in and near the Arctic, ICC proposes the drafting of a circular by the proposed working group which encourages the development of ECA by states in and near the Arctic to support BC emissions reduction from shipping.

17 Speed reduction has proven to be an effective tool, if applied appropriately, to reduce not only BC and GHG emissions but to limit underwater noise and ship strikes. The Sub-Committee should continue to monitor developments at the SDC Sub-Committee with regard to underwater noise reduction and at MEPC on reduction of GHG emissions.

Action requested of the Sub-Committee

18 The Sub-Committee is invited to consider the comments provided above, in particular the elements provided in paragraphs 15 to 17, and take action as appropriate.