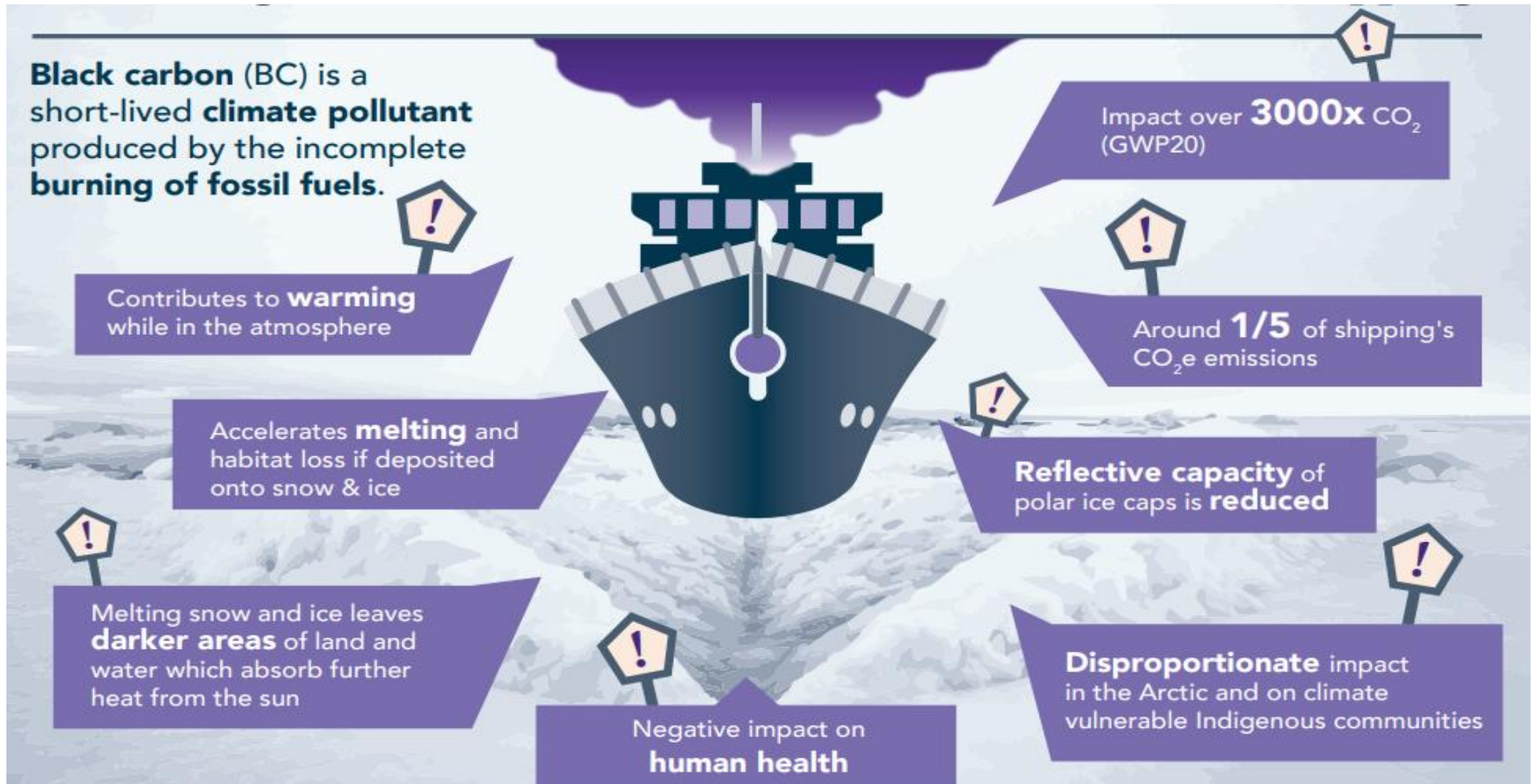




The Arctic, Black Carbon and Shipping

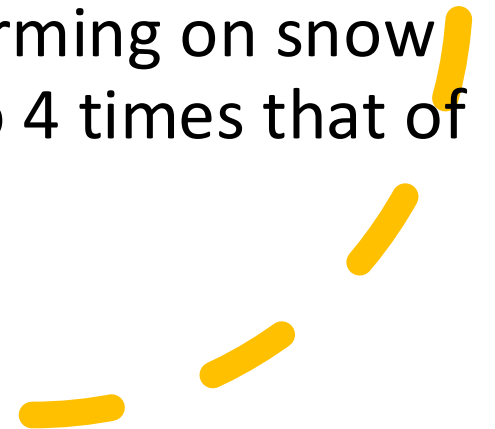
Jim Gamble
Senior Director
Pacific Environment

GHG emissions and black carbon from shipping impacting the Arctic



Black Carbon is a very short-lived forcer, so its effects are place based.

- CO₂ is a very long-lived (hundreds of years) and evenly distributed gas (molecules) that operates on a global level, compared to BC (particles) that remain in the air for a just a few days or weeks before depositing.
- So, very relevant to the Arctic, the AR6 report actually doubled estimates of the warming potential of BC on snow and ice. This is due to better understanding of BC's warming on snow forcing, estimated by AR6 as 2 to 4 times that of equivalent CO₂ forcing.



Reducing BC emissions can significantly slow warming in the Arctic.

- Focus on sources in or close to the Arctic (or other seasonal/permanent ice and snow, or cryosphere).
- Focus on sources with a higher ratio of black carbon, such as flaring and marine shipping.
- Of all the sources of black carbon in the Arctic, shipping is the only one that is increasing.



How to reduce black carbon emissions from shipping?

Next steps - IMO Member States must...

1

Agree to **immediate action to regulate emissions of black carbon from ships** which impact the Arctic.

2

Develop **compulsory measures to reduce black carbon emissions from ships**, including:

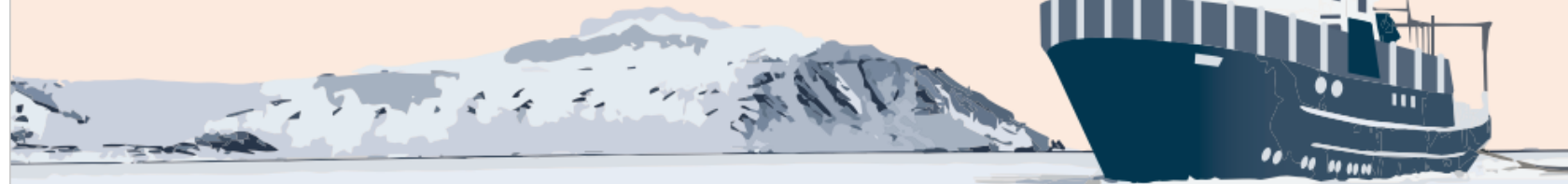
- a new black carbon (switch to distillate) regulation in MARPOL Annex VI
- designation of new Arctic BC emission control areas
- an aromatic fuel standard
- use of technology to reduce black carbon emissions

3

Agree to the **integration of black carbon in GHG measures** designed to reduce climate impacting emissions.

4

Support **regional and domestic action** to rapidly lower black carbon emissions from ships.





Questions?

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