

Black Carbon emissions from shipping are a special threat for the Arctic



Ships burning HFO produce climate pollutants, including black carbon (BC), which lead to intense warming when in the atmosphere over snow and ice.

Black carbon is a powerful short-lived climate pollutant

BC's warming impact is **7 to 10** times greater when it lands on ice and snow, leading to even more melting.

As snow and ice melt exposing darker and less reflective land and water, warming is accelerated as the sun's rays are absorbed.

2% of BC in the Arctic comes from shipping, BUT it has a much greater heating impact as other BC sources are high in the atmosphere with less chance of depositing onto ice and snow.

Most BC from Arctic shipping deposits in the Arctic so the impact is disproportionately large, especially as most ships operate close to glaciers, snow-covered coasts, or sea ice margins – all vulnerable to intensified melting from BC.

As shipping in the Arctic grows, continued use of heavy fuel that emit BC, will accelerate the disintegration and collapse of Arctic ice and permafrost.