



## Critical Agenda: Decarbonising the global shipping industry

### Introduction

The marine shipping sector is responsible for moving roughly 90% of globally traded goods, and 3% of worldwide CO<sub>2</sub> equivalent emissions. Recent growth in shipping demand has led to a commensurate rise in sector-based emissions; evidence of the tension between economic growth prerogatives and climate action.

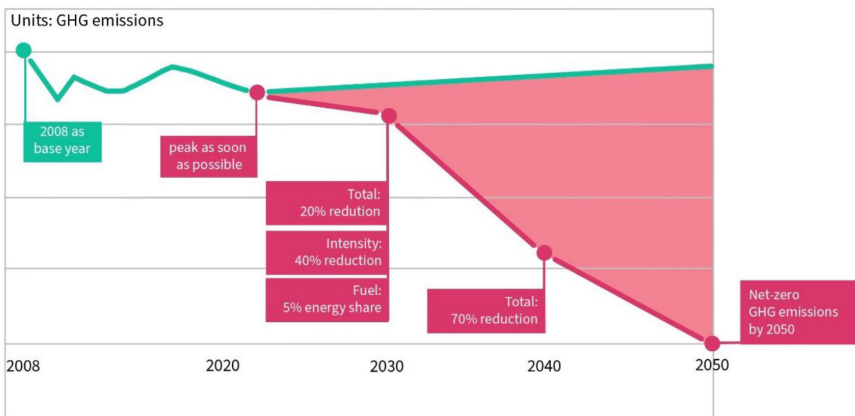
The International Maritime Organisation (IMO) released a revised GHG Strategy in mid-2023 which seeks to bring the pace of decarbonisation in the shipping sector into alignment with the Paris Agreement. The IMO has now moved from targeting a 50% reduction in maritime emissions by 2050 to achieving net-zero by the same date. 2030 targets have also been made much more ambitious – see diagram below:

These new IMO targets, along with existing Fuel EU Maritime regulations (which mandates the uptake of low emissions fuels) are successfully driving new behaviours into shipping companies. We are already seeing a boom in investment in a more modern and efficient global shipping fleet and this investment alongside operational measures such as increased hull cleaning and reduced sailing speeds will increase the efficiency of the shipping fleet by around 20% by 2030. However, whilst it might not feel it for those having already made these bold investments in fleet modernisation in recent years, this is just the low hanging fruit, and the harder steps for shipping decarbonisation are still to come.

Despite increasing efficiency, emissions from the shipping sector are still growing due to increased demand for traded goods.

The next major stage of decarbonisation requires the development and use of low and zero carbon fuels – biofuels and hydrogen based fuels. This will be much more expensive to deliver, but the real challenge is how to rapidly scale this low carbon fuel supply. As context:

**If you utilised all wind generation capacity in the EU at the end of 2022 (205 GW) to produce e-fuels for shipping, you would be able to decarbonise less than 15% of the global shipping fleet.**



**Total:** Well-to-wake GHG emissions; **Intensity:** CO<sub>2</sub> emitted per transport work; **Fuel:** Uptake of zero or near-zero GHG technologies, fuels and/or energy sources

■ Emission pathway in line with IMO's GHG strategy  
■ Business-as-usual emissions ■ Emission gap

In many ways, the challenge of emissions reduction in the marine shipping industry will serve as a bellwether for other hard-to-abate sectors. The vast array of seafaring vessels currently in use, lingering uncertainty around enforcement of targets and regulation, unproven technologies, underdeveloped infrastructure and a shortage of deployable funds make for a familiar set of issues which are common across all sectors which cannot be electrified.

**Themes: Net zero roadmaps; Sustainability at scale; Corporate and consumer behaviour change**