

Discussion Starter: Achieving Zero Emissions in Sea-Freight

Who should read this?

This document is a starting point for buyers of international ocean freight services, mostly container and bulk, to engage with their service providers on mitigating climate change impact from their sea freight operations.

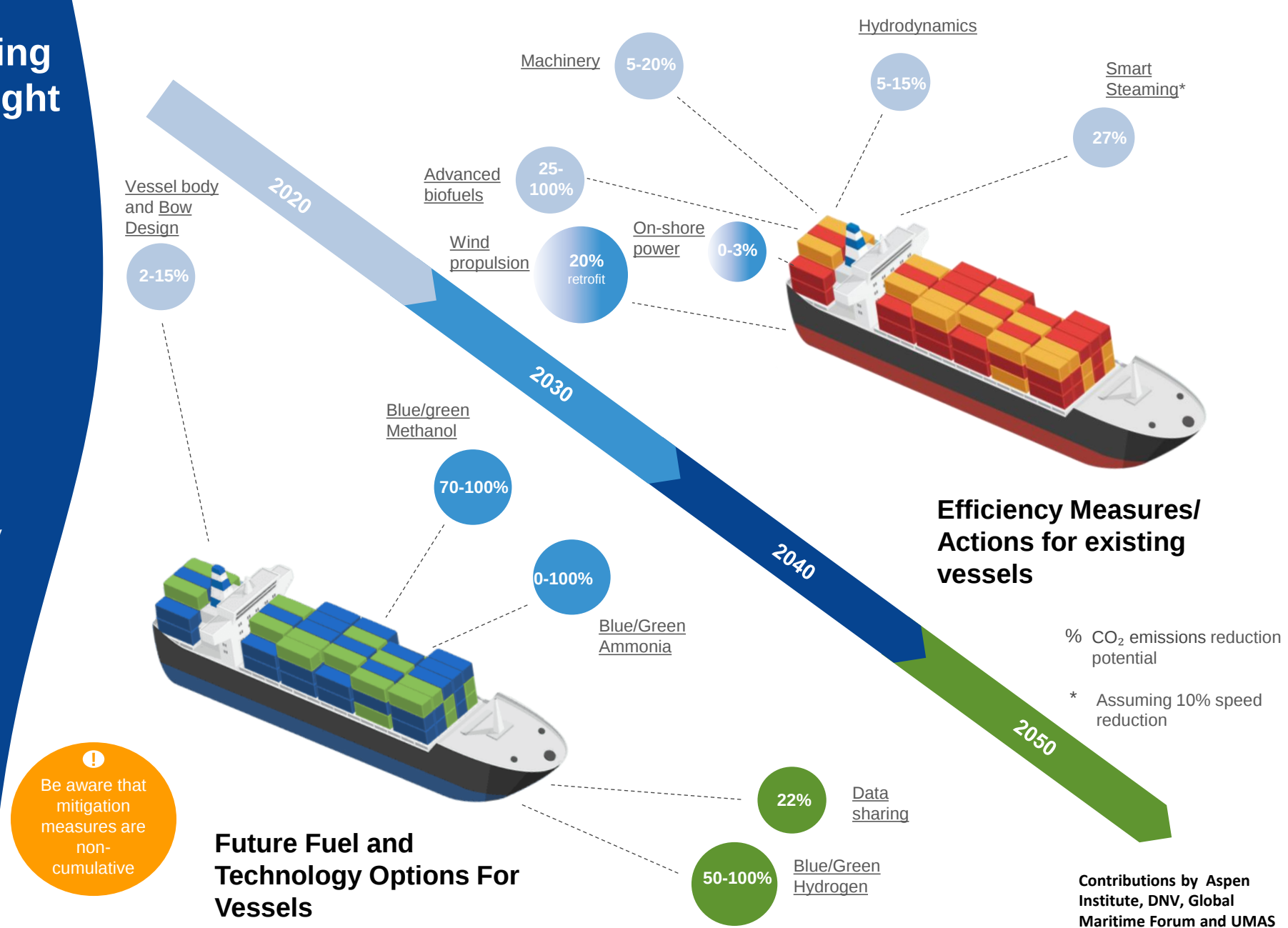
Why act now?

- Customers are increasingly aware of the impact of supply chain logistics on climate change.
- Regulations on greenhouse gas emissions in sea freight logistics are being tightened and IMO is soon expected to increase its ambitions to become much stricter.
- Cargo owners and carriers, therefore, face growing demands from society to reduce greenhouse gas emissions.
- This requires both short-term and long-term strategies for realizing tangible emissions reductions using the technology available now, while also investing in the development of new technology to realize genuine Zero emissions solutions by 2050 as aligned with the [Paris Agreement](#).

Key takeaway

- Overview of current and future technical and operational measures that can be discussed with service providers when considering how to decarbonize sea freight.
- Investments to new technologies should start **now** to account for the slow ramp-up of the scaling and the global availability of new tech.

Reflect, get inspired and engage with your service providers on how to implement a shared roadmap to “ZERO”.



Legislation Landscape

IMO regulatory framework

EEDI

Energy Efficiency Design Index for new build ships to reduce energy consumption (and emissions of new vessels)

EEXI

Energy Efficiency Existing Index for existing ships, to limit carbon emissions, by January 2023

SEEMP

Ship Energy Efficiency Management Plan introduced CII (Carbon Intensity Index), by January 2023

CSI

Clean Shipping Index online tool to provide rating for the environmental performance of registered ships, mainly in Europe

CEF

2.0 Fund (2021-2027)
€ 25.81b fund for establishment of trans-European networks. Check with local authorities for additional innovation funding

'Fit for 55' and 'FuelEU Maritime'

'Fit for 55' is an EU Initiative to incorporate the cost of carbon via EU ETS. FuelEU Maritime is a proposal to stimulate uptake of green fuels in the maritime sector

Targets and Impact:

'Fit for 55' supports the EU's goal to reduce emissions by 55% in 2030 and achieve climate neutrality by 2050.

The price of carbon from 'Fit for 55' will be felt from 2025, where cost increases are likely to be felt in the maritime sector.

EU Innovation Funds are intended to support stakeholders in financing green projects.

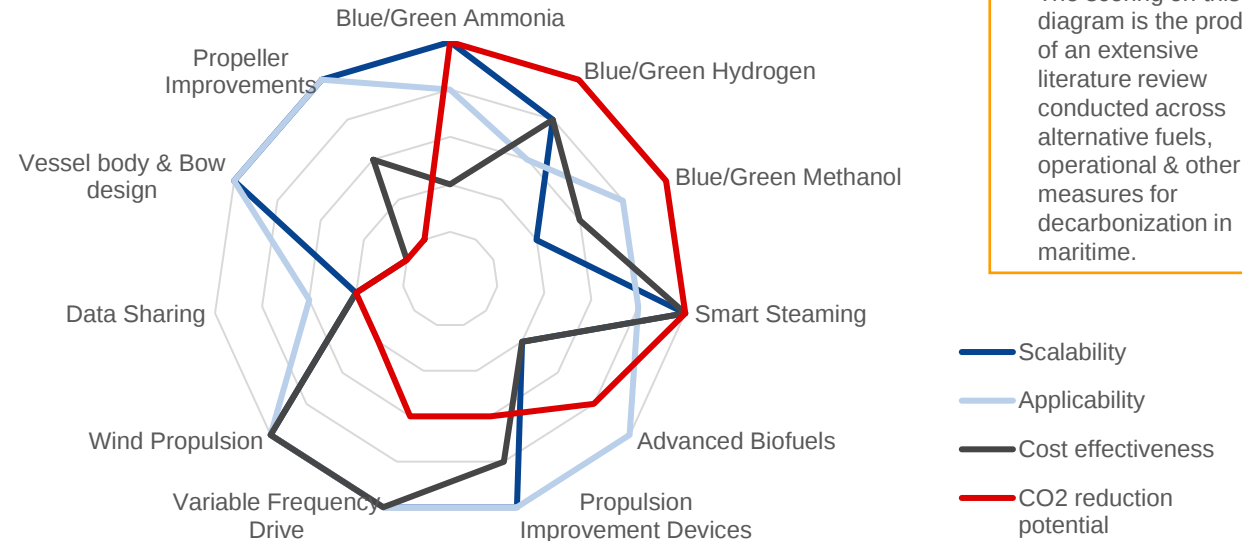
Paris Agreement: work towards zero by 2050 to support the 1.5-degree target. If companies wish to lead decarbonization then they need to act now.



Clean Cargo

Shipper / LSP members can access carrier emissions data to identify opportunities for engagements to reduce carbon emissions

Decarbonization Measures Profiles



Note!

The scoring on this diagram is the product of an extensive literature review conducted across alternative fuels, operational & other measures for decarbonization in maritime.

Case Studies/Pilot Projects

Optimizing current fleets

Maersk Biofuels

- 20% blend of 2nd Gen Biofuels
- Round-trip Rotterdam/Shanghai
- ~1.5M Kg CO₂ emissions avoided



Dual Fuel Methanol tankers

- 8 dual fuel ships to be delivered between 2021 & 2023
- Engines can run on methanol or traditional fuels



Zero emission shipping for container shipping

- Pilot started in 2020
- Inland waterways
- Heineken to move 45,000 containers



Los Angeles-Shanghai Green Shipping Corridor

- By 2030
- First zero-carbon trans-pacific container ships

