An introduction to shipping decarbonisation and ongoing key initiatives

How to reduce carbon emissions from maritime transport?

Climate Action Accelerator Webinar

11th June 2024
Who we are

A not-for-profit organisation.

An independent decarbonisation centre formed in 2020 with a grant from Lloyd’s Register Foundation

More than a decade of expertise and research on shipping decarbonisation

Facilitator, connector, and knowledge partner focused on working with other stakeholders to deliver impactful outcome
MARITIME DECARBONISATION HUB

Our mission

To accelerate the safe and sustainable decarbonisation of the maritime industry.

3 Strategic Goals

- **Safe adoption** of sustainable zero carbon marine fuels.
- **Increase uptake** of sustainable zero carbon marine fuels.
- **Influence** the appropriate and effective policy and regulations.

Our Team
Why we need Shipping Decarbonisation

• Shipping today produces emissions equivalent to those of a country like Japan, which is among the top 5 countries with the highest emissions.

• The yearly emissions account for approximately 3% of the total global CO2 emissions.

• If no action is taken, the proportion of emissions from shipping could increase significantly as other sectors transition to decarbonisation.
A policy-driven transition

WTW GHG emissions (Mt CO₂e)

- BAU
- 2008 BASELINE
- 2018 IMO GHG Strategy
- 2023 IMO GHG Strategy
- 2023 IMO GHG Strategy (striving)

Adapted from ICCT

Source: lloydslist.com/

Source: IMO website
A policy-driven transition

The timeframe when we need to see a change in trend

Adapted from ICCT
IMO GHG Strategy Targets

2030

• 40% reduction of CO\textsuperscript{2} per transport work
• 5% uptake of zero emissions fuels
• Checkpoint: 20% reduction of total GHG emissions, striving for 30%

2040

• Checkpoint: 70% reduction of total GHG emissions, striving for 80%

2050

• Net-zero GHG emissions by or around 2050

Mandatory Measures Entry into Force 2027
Operational interventions

Up to 20%

• Speed reduction
• Utilisation
• Just in time arrival

Technical energy efficiency interventions

Up to 20%

• Hull coating
• Hull optimisation
• Air lubrication
• Cleaning
• Waste-heat recovery
• Hybrid
• Fuel cells

Fuel switch

Up to 100%

• Biofuels
• Methanol
• Ammonia
• Methane
• Hydrogen
• Wind power
• Nuclear
• CCS

Different potential with different types of contribution, however, interconnected to each other
Critical window for change

• Enable the change in trend
• Pave the way to long-term solutions and regime shift
• Accelerate uptake of sustainable fuels (zero/near zero carbon fuels)

Source: justhourglasses
The Zero Carbon Fuel Monitor (ZCFM) is a tool that monitors the readiness levels of different decarbonisation solutions. It provides an overview of the current status and highlights potential areas of interventions.

Zero Carbon Fuel Monitor - Examine data on marine fuels | LR
More than forty Green Shipping Corridors are active today

The key purpose of green shipping corridors is to initiate the uptake of sustainable fuels in shipping
The Silk Alliance Green Corridor Cluster focuses on a regional fleet operating across the Indian and Pacific Oceans with the potential to bunker in Singapore in future. The regional cluster approach is designed to create a scalable and stable demand signal to drive the development of regional fuel supply and bunkering infrastructure.

10 million CO₂ tons

3 million HFO tons

The green corridor is an A-to-A route. (Singapore-to-Singapore)
The Green Corridor Cluster – the Silk Alliance
Silk Alliance’s achievements in the past 2 years

- **2022**
  - Launch of The Silk Alliance
  - Onboarding new members
  - May 2022

- **2023**
  - Launch of website and logo
  - April 2023

- **2024**
  - Released implementation plan
  - Workshop in April to discuss execution
  - April 2024

- **2025**

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**Timeline:**
- **May 2022**: Launch of The Silk Alliance
- **October 2022**: Onboarding new members
- **April 2023**: Launch of website and logo
- **October 2023**: Released implementation plan
- **April 2024**: Workshop in April to discuss execution
Zero Emissions Maritime Buyers Alliance

- Accelerate commercial deployment of zero-emission (ZE) shipping solutions
- Enable economies of scale for freight buyers and suppliers
- Help cargo owners maximize emissions reduction potential beyond what any one freight buyer could accomplish alone

Round 1

September – November 2023: RfP open
20+ members sought 600k+ TEU complying with ZEMBA’s LCA guidelines and ZE Fuel definition

April 2024
Winner announced
more than a dozen ZEMBA members have collectively committed to purchase the environmental attributes

ZEMBA members: including Amazon, Patagonia, and Tchibo alongside Bauhaus, Brooks Running, DB Journey, Green Worldwide Shipping, lululemon, Meta, New Balance, Nike, REI Co-op, and Sport-Thieme

Winner Carrier: Hapag-Lloyd

Fuel: Bio-methane
Zero Emissions Maritime Buyers Alliance

Round 2

• The LR Maritime Decarbonisation Hub continues to join forces with ZEMBA to deliver the second tender

• ZEMBA is seeking information on the development of zero emission fuels and technologies – particularly e-fuels

May – June 2024:
RfI open

Seeking information to shape the second tender

Late 2024
RfP

• The survey is live as of, May 30th, and will be open through June 21st.
Regional synergies and access to public and private funds are key enablers for developing the market for sustainable fuels

- Foster collaboration across regional stakeholders and public and private actors
- Provide recommendations and drive commitments from governments and key industry stakeholders

**Progress & Next Steps**

- **Launch at Singapore Maritime Week, April 2024** -- roundtable held with energy and transport ministry and departmental representatives
- **Launch (TODAY) Summary Statement** -- with key takeaways from first roundtable & commitments from ministries
- **Roundtable 2** -- with private and ministerial reps across energy & maritime (Sep 2024)
- **Future Dialogues** -- continued high-level ministerial roundtables at flagship regional events and COP29
A Common denominator

Within this timeframe, policy and voluntary actions will shape the course of the transition.

A collaborative effort is the key to all first movers' initiatives
What actions can you take today?

✓ Consider to pay a green premium
✓ Evaluate the decarbonisation strategies of your partners, and establish collaborative effort where strategies can be shaped together across the entire supply chain (e.g. join alliances)
✓ Be creative in exploring new business models, and procurement practices based on a vertically integrated approach
✓ Follow policy debate at IMO, EU and national level
✓ Promote long-term solutions and communicate externally your expectations
Maritime Decarbonisation Hub

Dr Carlo Raucci – Director of Sustainable Fuels and Strategy
carlo.raucci@lr.org