

Financing Zero- Emission Vessels (ZEV)

Presentation to ShipZero28 - ZESTAs
IMO Headquarters, 11-12 Sep, 2023

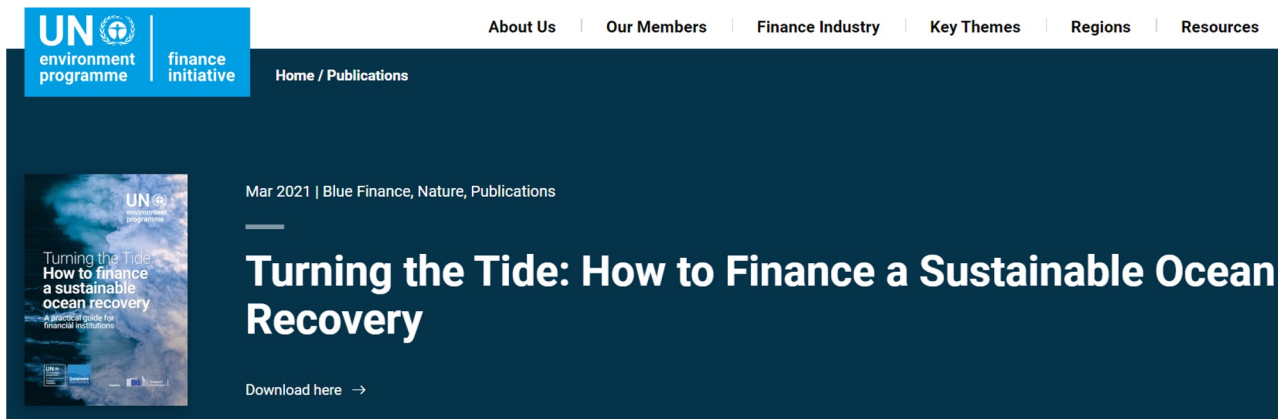
D. Michael Adams,
Ocean Assets Group

About Us

Ocean Assets Group: Supporting Blue Economy with research & investment.

Manages BlueDeals platform: Credit finance for Blue SMEs in Global South

Authored Shipping & Ports chapters in *Turning the Tide* for
Sustainable Blue Economy Finance Principles, hosted by UNEP-FI



The screenshot displays the UNEP-FI website interface. At the top left is the logo for the UN environment programme and the finance initiative. A navigation menu includes links for 'About Us', 'Our Members', 'Finance Industry', 'Key Themes', 'Regions', and 'Resources'. The main content area features a dark blue background with a white header 'Home / Publications'. A featured publication is highlighted with a thumbnail image of the book cover, titled 'Turning the Tide: How to finance a sustainable ocean recovery'. The text next to the thumbnail indicates the publication date as 'Mar 2021 | Blue Finance, Nature, Publications'. The main title 'Turning the Tide: How to Finance a Sustainable Ocean Recovery' is prominently displayed in large white font. Below the title, there is a link that says 'Download here ->'.

Financing ZEV Innovation

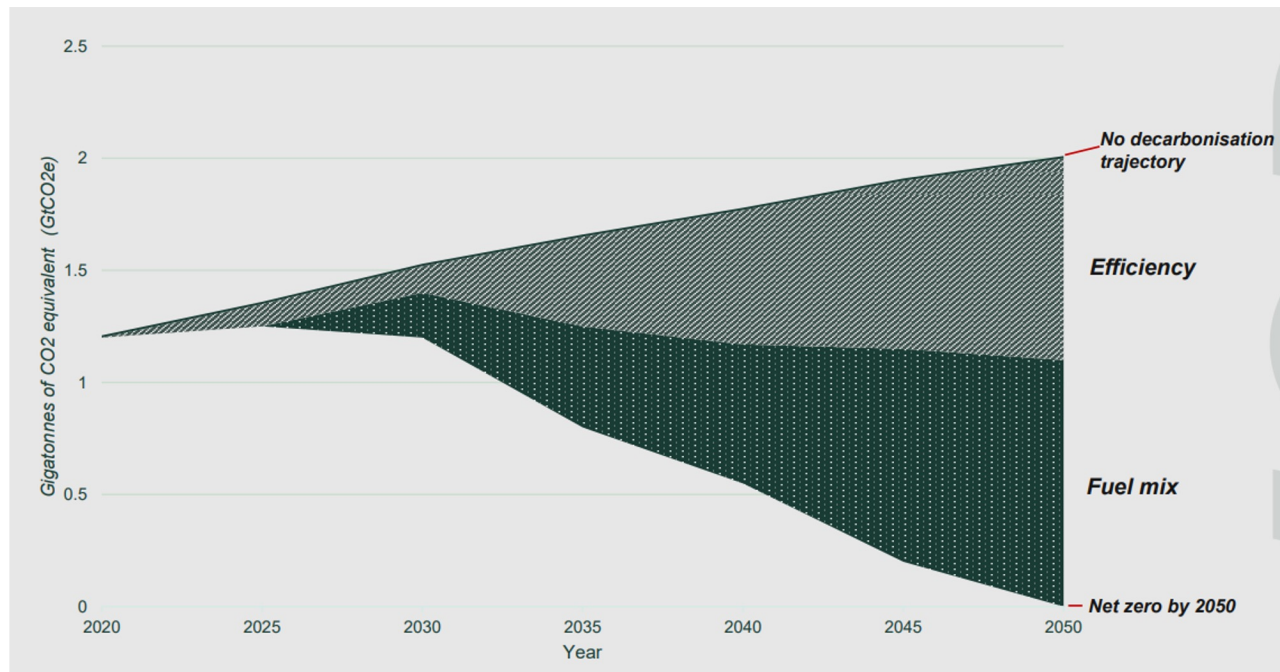
The Bill*:

- **\$40B / year** to 2030 for ZEV fuels & bunkering*
- **\$1.9TR** to decarbonise shipping fully - **87% to land-based infra**

Reality-Check:

If we overshoot 2030 targets, we must meet 90% of targets by 2040!

***Source:** UMAS Advisory Services



Source: Global Energy Perspective on Maritime, Maersk-McKinney-Moller Center

Join Groups for ZEV Finance

- **Transition strategies** need partners
- **No silver bullet** among technologies
- **All parts of the Value Chain** have a stake

Global Maritime Forum:

- Getting to Zero Coalition
- Sea Cargo Charter



**POSEIDON
PRINCIPLES**

ZESTAs.



LR Maritime Decarbonisation Hub:

- Wins IMO NextGEN Connect Challenge
- First-Mover Framework Methodology

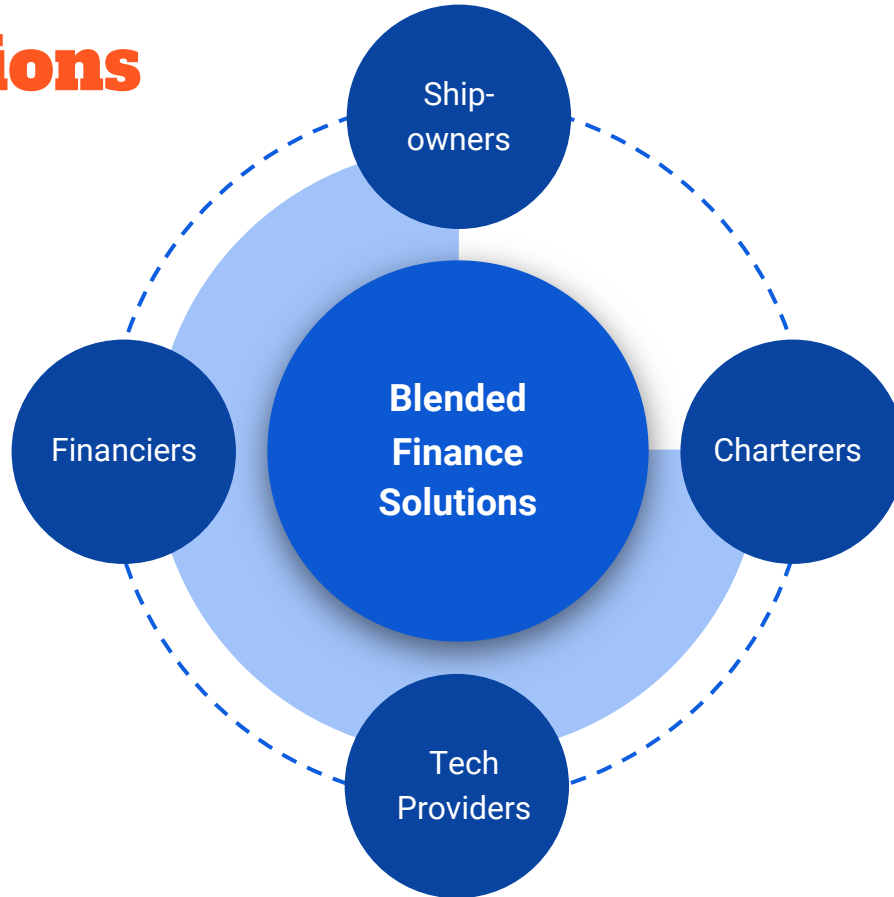
Climate Bonds INITIATIVE

Collaborations

Shipowners cannot do it alone...

Co-Finance the “Uncertainty Gap” with stakeholders:

- Shipowners**
- Charterers**
- Tech Providers**
- Financiers** - public & private



Combining Solutions:

- Energy Efficiency
- Renewable Fuels
- Supply Chains
- Auxiliary Power

Reduces risk for financiers & shipowners

Who Will Pay the Decarb Bill?

Catalytic Financiers

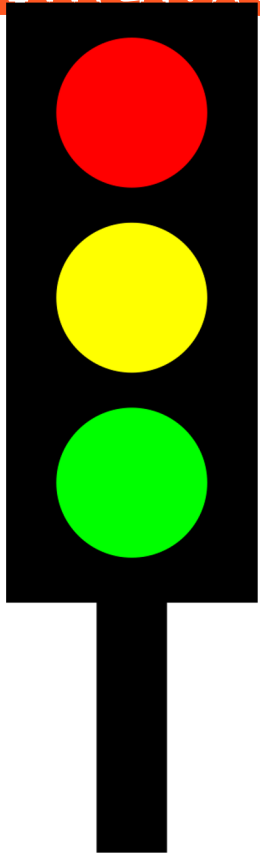
- **EU:** Fuel-EU Maritime Initiative & “Fit for 55”. *LNG Risk - Stranded Assets.*
- **ETS Game-Changer:** EU Emissions Trading Scheme *at right price levels*
- **National & Multilateral Development Banks:** Capital guarantees, First-loss
- **Impact Investors** in green energy will add shipping - *only when catalytic finance reduces tech-regulatory risks!*
- **Green Bonds & Sustainability-linked Loans:** Performance-based terms



Private Financiers

- **Corporates:** Maersk, MSC, Mitsui, Wartsila, Cargill, Ikea... *Partnerships!*
- **Commercial Lenders:** Reduced players prefer large deals, proven technologies.
- **Private Equity:** Institutions have exited shipping, Risk-off environment continues.
- **Leasing is the New Equity:** Chinese & Japanese lessors fill the gap with higher leverage. Direct lending also increases.
- **Consolidation:** Well-capitalised players that can afford investing in DeCarb

Guidance - Sustainable Blue Finance Principles



Turning the Tide Report provides financing recommendations:

AVOID: Fossil fuel systems - long-term investments

CHALLENGE: Transition plans not aligned with IMO Trajectory

SEEK OUT: Zero Emission systems for Shipping & Ports

A Practical Toolkit covering all Blue Economy sectors

Developed by 50 experts for UNEP-FI membership of **400** financial institutions

Consider signing the Sustainable Blue Economy Finance Principles!

Shipping: Guidance Excerpts (1)

Indicator	Verification	Action	Recommendation
Lack of strategy in place to transition from fossil fuel dependence.	Company strategy to transition from fossil fuel dependence	CHALLENGE	Require development of a decarbonisation strategy aligned with IMO trajectory. For banks, become a signatory to the Poseidon Principles.
No plans for – or installations of – renewable energy.	Percentage of power from green renewables	CHALLENGE	Require a time-bound plan to transition to clean marine power, starting with percentage targets for clean auxiliary power. Support R&D and early adopters of hydrogen, ammonia, methanol or biofuels.
No collaborations to transition to green shipping technologies.	Long-term contracts between shipowners and charterers	CHALLENGE	Require a transition plan, including alignment of supply chains with renewable power increases. Support ship-owner / charterer partnerships to align their interests and assist in the uptake and implementation of green technologies.

Shipping: Guidance Excerpts (2)

Indicator	Verification	Action	Recommendation
Dependence on fossil fuels.	Percentage of fossil fuel transport and bunkering	CHALLENGE	Require plans to diversify from participation (including transport) in oil/gas/coal industry. Replace with participation in alternative fuel bunkering and transport.
Key features of green supply chains are in place: renewable energy, waste management, sustainable sourcing.	Sustainability reports and audits of the environmental footprint of each partner in port supply chains	SEEK OUT	Seek out companies employing Green Supply Chain Management (GSCM). Support with partner collaborations and IT logistics finance.
Evidence of support for green technology development, including policy frameworks and shipping carbon markets.	Participation by shipowners and financiers in IMO and industry dialogues to develop a shipping carbon market and other R&D funding initiatives	SEEK OUT	Seek out companies that participate in policy and finance initiatives to fund green shipping technologies, including carbon pricing.

Ports: Guidance Excerpts (1)

Indicator	Verification	Action	Recommendation
Non-alignment with IPCC and IMO guidelines for NEZ by 2050	Independent audit of port-generated emissions	CHALLENGE	Require an emissions policy aligned with IPCC, IMO or (best) EU - with monitoring by 3rd party
Ports not using renewable power or providing for docked ships	Percentage of, and commitments to increase, renewable power use	CHALLENGE	If renewable power supply is available in region, require time-bound to install at port. If not yet available, encourage policies to add clean power supply chains
Port is incentivising ships with good emissions ratings	Environmental Ship Index and Clean Shipping Index	SEEK OUT	Seek out ports that offer incentives to attract ships with good emissions ratings
Green transport options connect ports to hinterland	Audits of hinterland transport system; Plans to transition low emission modes	SEEK OUT	Seek out ports or companies that provide green port-hinterland connections

Ports: Guidance Excerpts (2)

Indicator	Verification	Action	Recommendation
Ports using green supply chains for renewable energy, waste management, sustainable sourcing	Audits of environmental footprints of each partner in port supply chains	SEEK OUT	Seek out ports that are implementing Support Green Supply Chain Management (GSCM)
Ports that provide green port technologies, incl alternative fuel supplies	Periodic review of port skills and systems in place to support green technologies	SEEK OUT	Seek out ports that have Skills and systems available to support green port technologies. Support establishing Carbon Market for Shipping to fund green tech
No systematic approach that links baselining and monitoring to the Port's bottom line	Verify that port has monitoring systems to eliminate negative environmental and social impacts	CHALLENGE	Require ports to develop systematic plans for data collection that can be applied to multiple pressures and linked to business performance
Lack of preparedness for rising sea levels and storms	Insurance policies, disaster response and physical protections are not in place	CHALLENGE	Require ports/shipyards to establish strategies & finance-insurance plans for climate resilience and adaptation