

# Creating Equal and Robust Infrastructure Improvement Prioritisation Plan

Dr Aime Harrison



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# IMO Net-Zero Framework Defined

The Framework is a set of goal-based provisions for GHG emissions reduction (revised MARPOL Annex 6).



# IMO Net-Zero Framework Defined



INTERNATIONAL  
MARITIME  
ORGANIZATION

**A global fuel standard** that requires ships to gradually decarbonise ship fuels (i.e. how much greenhouse gas is emitted for each unit of energy used, across a fuel's life cycle); and

**A pricing mechanism** with set prices on the GHG emissions, to encourage the industry to reduce emissions to comply with the global fuel standard.

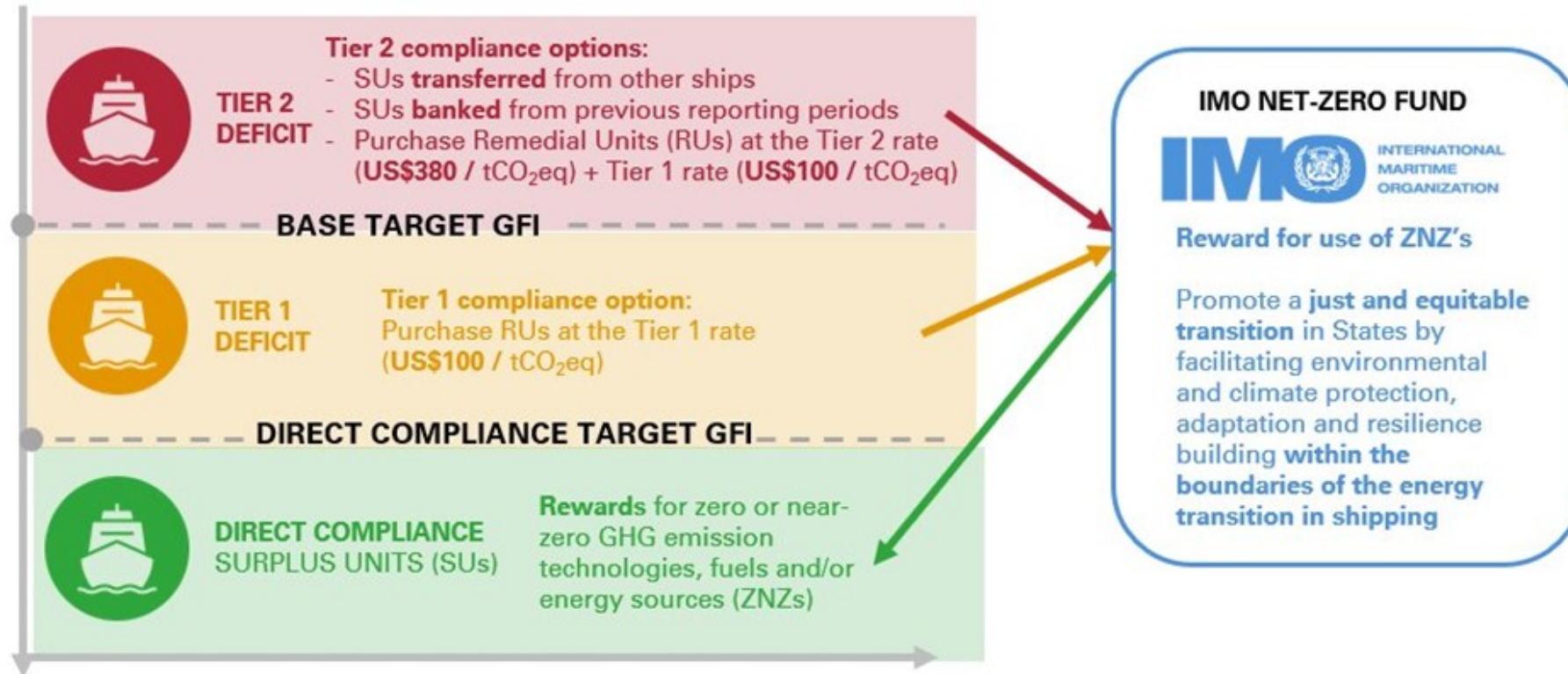
*The Framework applies to all oceangoing ships over 5,000 gross tonnage (GT). Ships under 5,000 GT are currently not covered, but discussions are underway to possibly include ships between 400 GT and 5,000 GT in the future.*



# IMO Net-Zero Framework: GHG Fuel Intensity

The framework covers emissions from the entire fuel lifecycle - from extraction and production to use on board the ship - known as the "**well-to-wake**" approach.

Annual GHG intensity (GFI)  
of a ship



# IMO Net-Zero Framework Update

## **April 2025 MEPC 83**

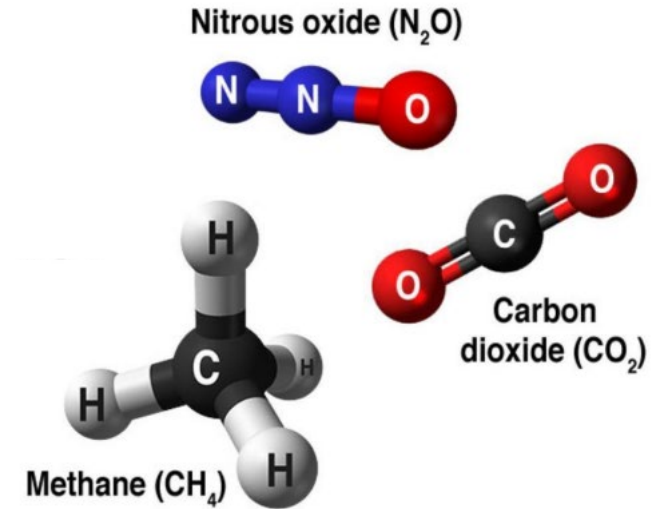
Adoption of amendments to the IMO Net Zero Framework approved by majority vote.

## **October 2025 MEPC Extraordinary Session 2**

Working Groups considered and developed a work plan for GHG emissions reduction-related activities, with the final discussions adjourned until **2026**.

## **April 2026 MEPC 84**

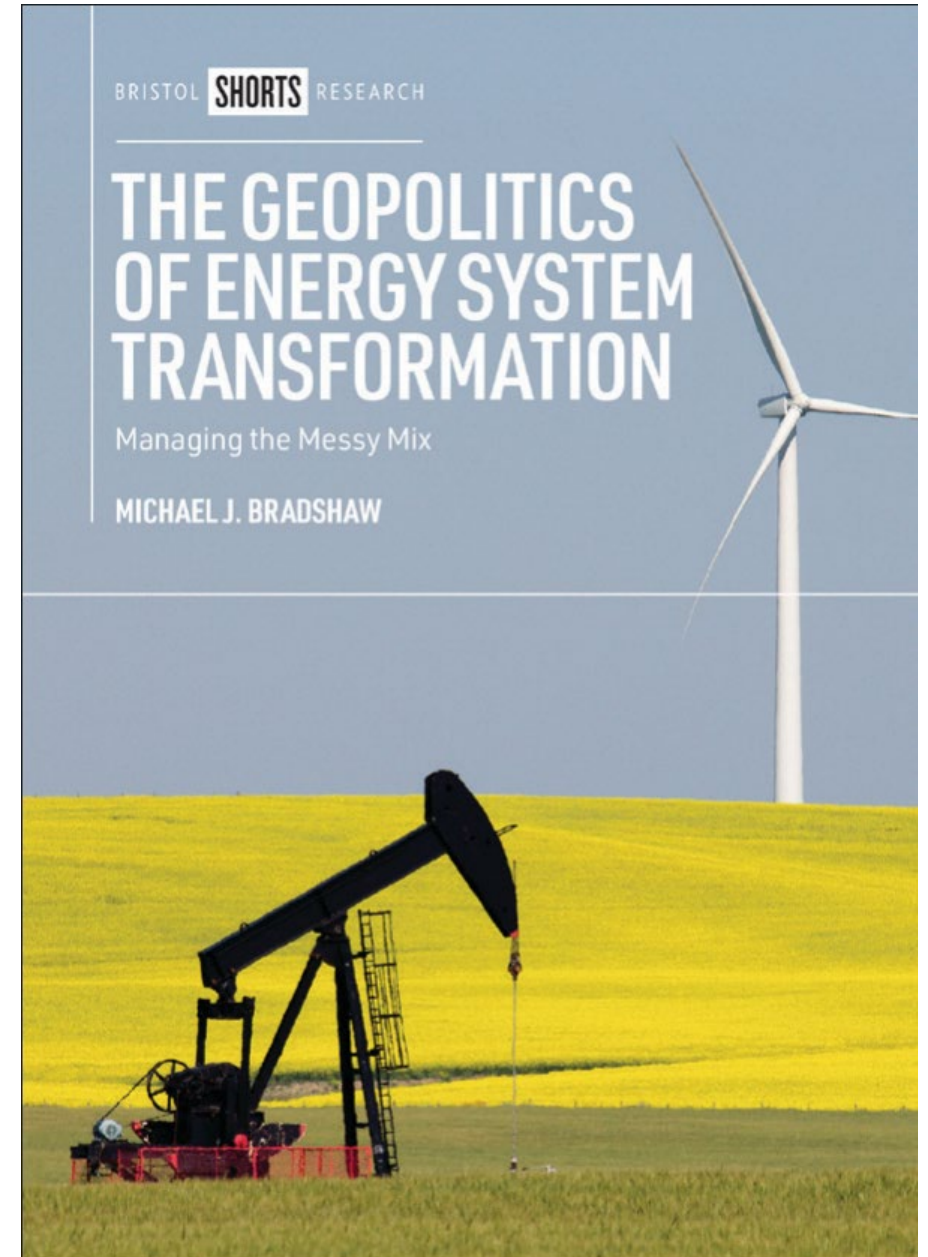
The GHG Working Group prepared the IMO NZF draft Terms of Reference for a special session to be held in advance of MEPC 85 (**November 2026**).



# Infrastructure Improvement Plans

*“...a failure to address [energy system transformation] challenges will lead to increased conflict and instability that hinder the growth in prosperity needed to finance climate action, slowing the pace of change...*

*...we need to simultaneously manage the problems of the decline of the old and the growth of the new to accelerate action.”*



# Infrastructure Improvement Plans

The IMO Working Group On Air Pollution And Energy Efficiency discusses the environmental impacts of **port waiting time**.

All waiting time for berthing, including anchoring and drifting (or waiting time after a specified period) and all time spent within the port when the engine is stopped, including cargo operation time, represents a major inefficiency in the mitigation of GHG emissions.



# Infrastructure Improvement Plans

**How can ports and shipping cooperate to reduce emissions from shipping?**



The IMO Net-Zero Framework suggests these first steps for port infrastructure:



Installation of innovative energy-saving devices on-board ships;



Hybridisation of ships – use of battery and electric power;



Infrastructure development for the provision and bunkering of alternative marine fuels;

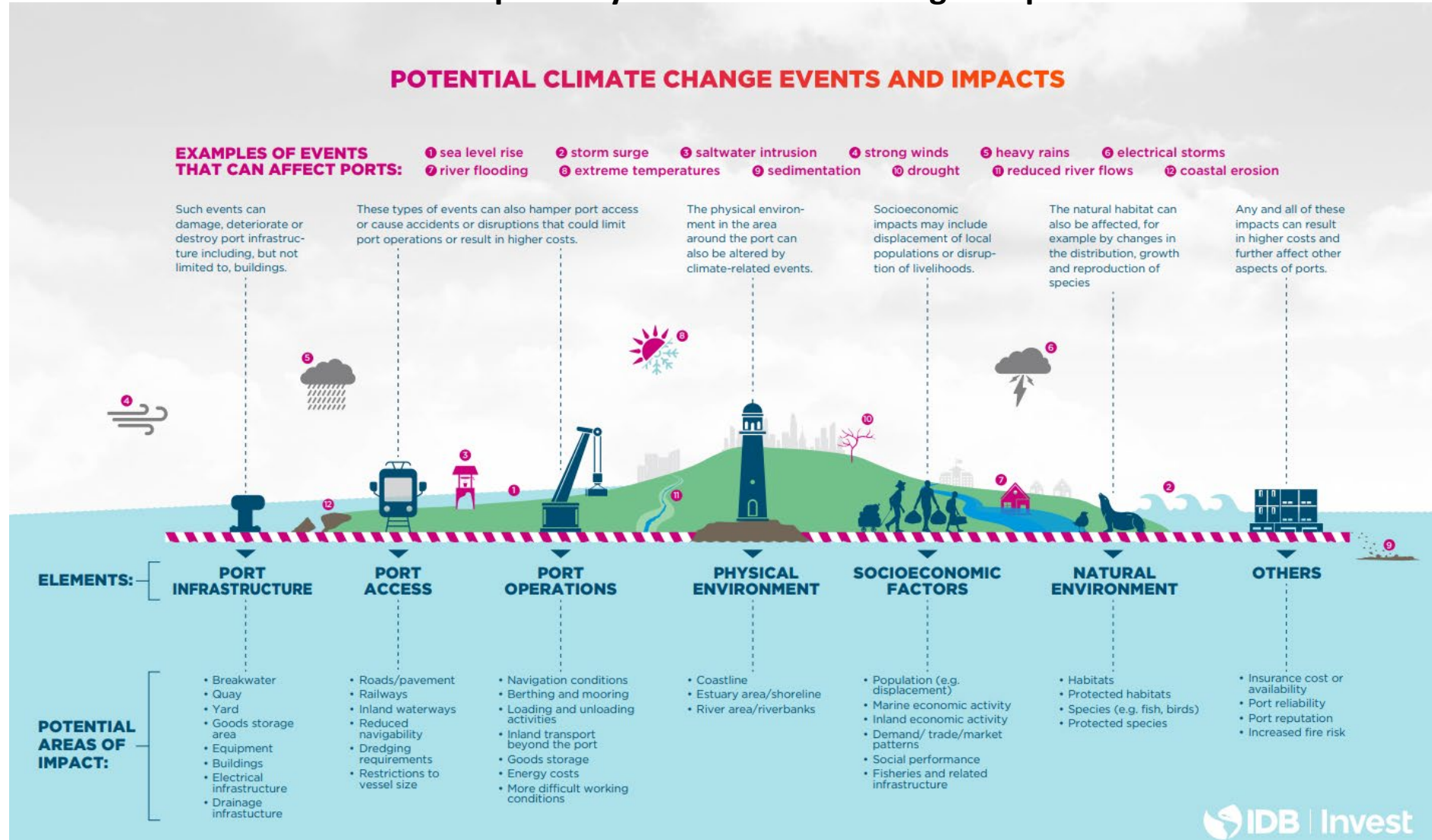


Technologies that enable ships to reduce emissions in port.

[Reference MEPC RESOLUTION.366(79) December 2022]

# Infrastructure Improvement Plans

## Plan transformation pathways and scale technological operations



# Infrastructure Improvement Plans



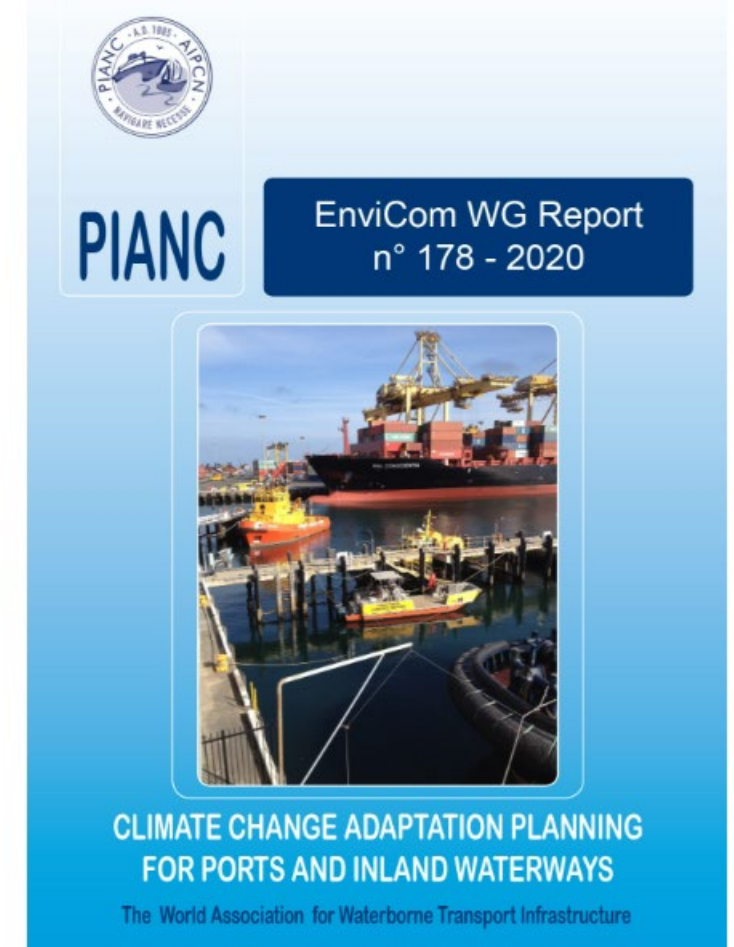
introduced a four-stage methodological framework to help port and waterway owners and operators plan for improved resilience:

**Stage 1** facilitates understanding operational impacts and identification of climate change adaptation requirements;

**Stage 2** identifies the type of climate-related information needed for an adaptation strategy, and explains how reference to climate change scenarios can assist in understanding the range of possible future changes;

**Stage 3** describes how to assess the vulnerability of waterborne transport infrastructure assets, operations and systems and analyse risk; and

**Stage 4** presents a 'portfolio' of potential measures (structural, operational and institutional) to be considered when developing an adaptation pathway.



# Infrastructure Improvement Plans



**Climate Change Costs to Ports and Waterways:**  
Scoping the Business Case Assessment for Investment in Adaptation



Permanent Task Group for Climate Change  
Technical Note No. 2 – 2024

**What factors motivate action to strengthen resilience?**

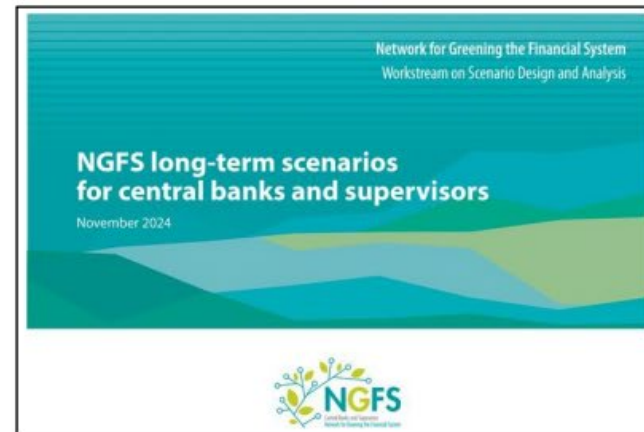
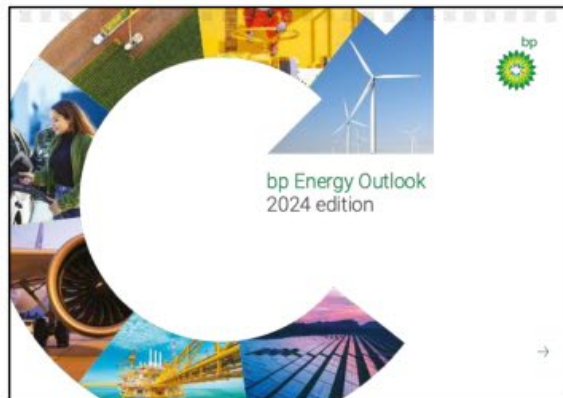
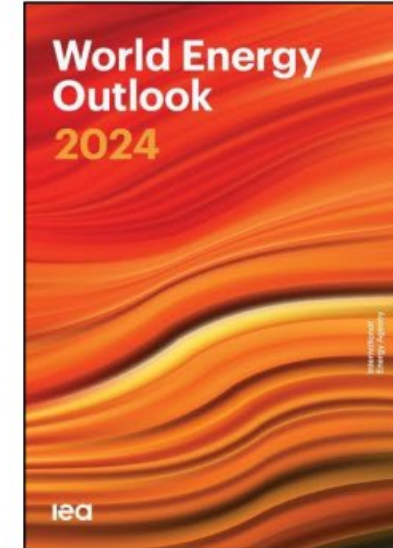
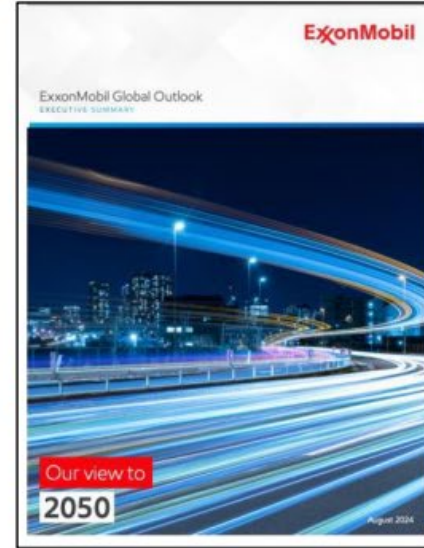
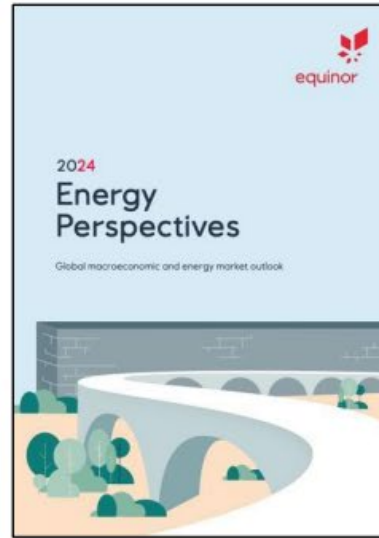
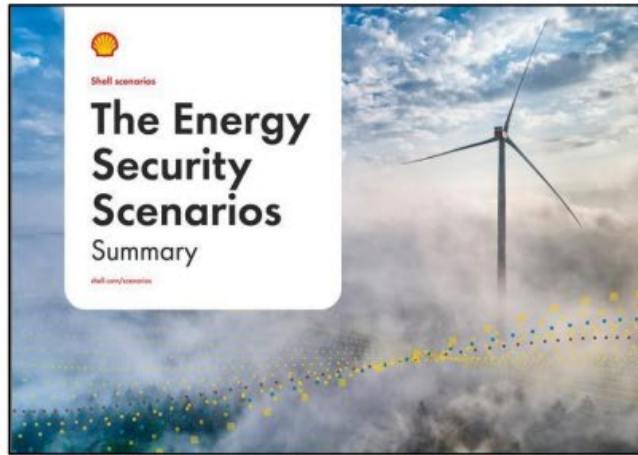
## Existing motivations

- Response to unprecedented event or more frequent extreme conditions
- Regulatory compliance (e.g. reporting) and project authorisation processes
- Good practice: reduce risks, KPIs, CSR targets

## Evolving initiatives

- Insurance sector
- Finance sector
- Contractual obligations or regulatory penalties

# Infrastructure Improvement Plans



Reference: Henderson, J. (2025) "Creating Sustainable Organisations", Warwick Business School

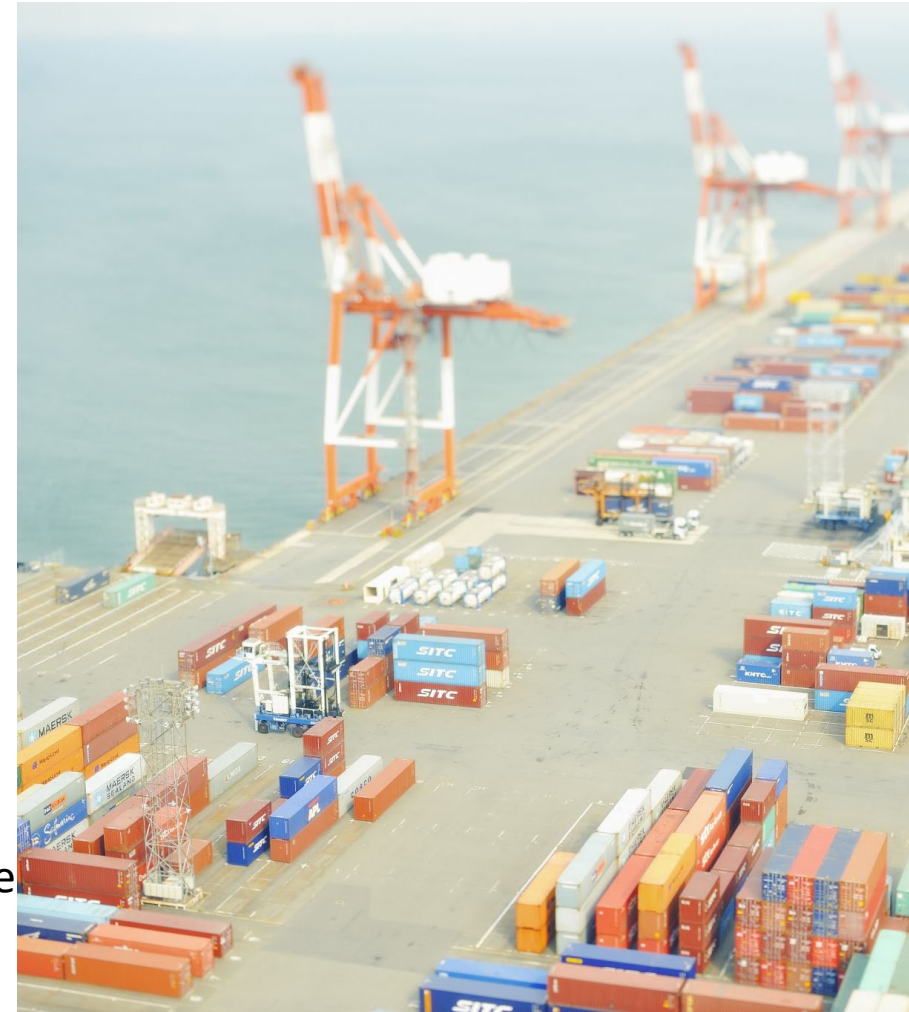
# Infrastructure Improvement Plans



“To decarbonise the shipping sector, it is imperative that governments not only increase their ambition at the global level through the IMO, but back this up with domestic action.

... To ensure an equitable transition, domestic actions by first movers should also take equity into consideration in their policies and decisions to ensure vulnerable and developing countries are not left behind, particularly around **finance, technology transfer and capacity building**. One mechanism that can be used to facilitate this is Green Shipping Corridors.”

Reference: <https://climateactiontracker.org/sectors/shipping/>



# Infrastructure Improvement Plans

## Green Corridors

### Stakeholders

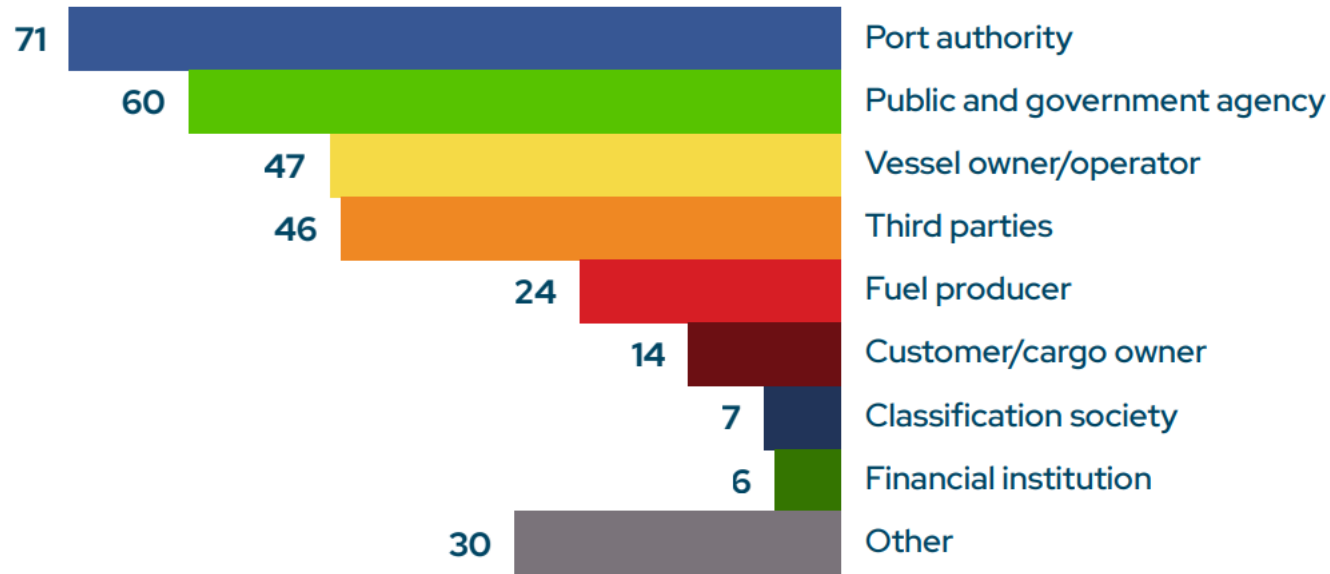
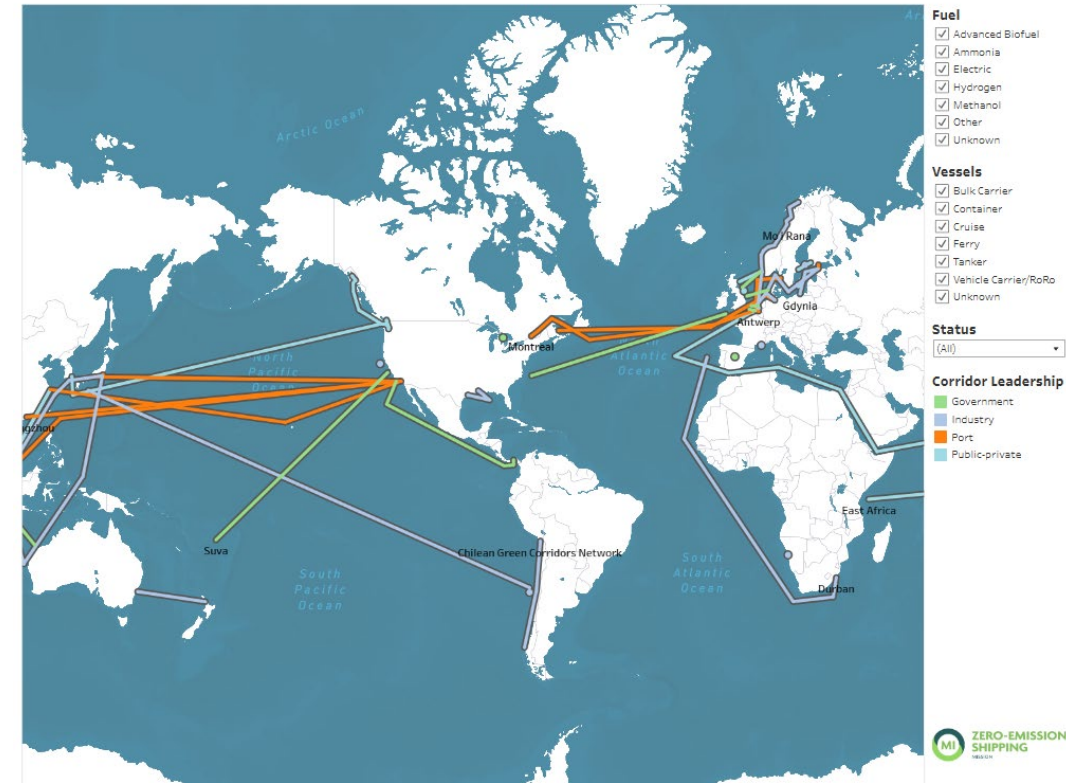


Figure 5: Number of stakeholders represented in the green corridor movement by type<sup>3</sup>



# Infrastructure Improvement Plans

## Green Corridor Priorities

	High priority	Low priority	Wrong approach
<b>Fuels and technologies</b>	Fuels requiring new vessels and infrastructure (MeOH, NH3, H2)	Low- carbon drop-in fuels, port operations	Fossil fuels including "transition" fuels (LNG)
<b>Business models</b>	Risk-sharing, demand aggregation, green premium offerings, joint ventures, 2030 focus	Cost optimisation, hedging, 2050 focus	Business-as-usual, one-size-fits-all solutions
<b>Policy</b>	Economic support at national level, bilateral action, exemptions, streamlined permitting, IMO rewards	R&D, IMO compliance	Leaving it to the market, wait-and-see approach
<b>Stakeholder management</b>	Vision and roadmapping, programme governance, public-private dialogue, neutral facilitation	CO2 targets and reporting, project governance, directionless knowledge sharing	Allowing passive participation

Reference: Global Maritime Forum (2025) *Annual progress Report on Green Shipping Corridors*

# Infrastructure Improvement Plans



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## EPA Clean Ports Program Background:

The Inflation Reduction Act of 2022 provides Environmental Protection Agency (EPA) with \$3 billion to fund zero emission port equipment and infrastructure, as well as climate and air quality planning, at U.S. ports. This historic investment will improve air quality at ports and surrounding communities, help combat climate change, and support meaningful community engagement.

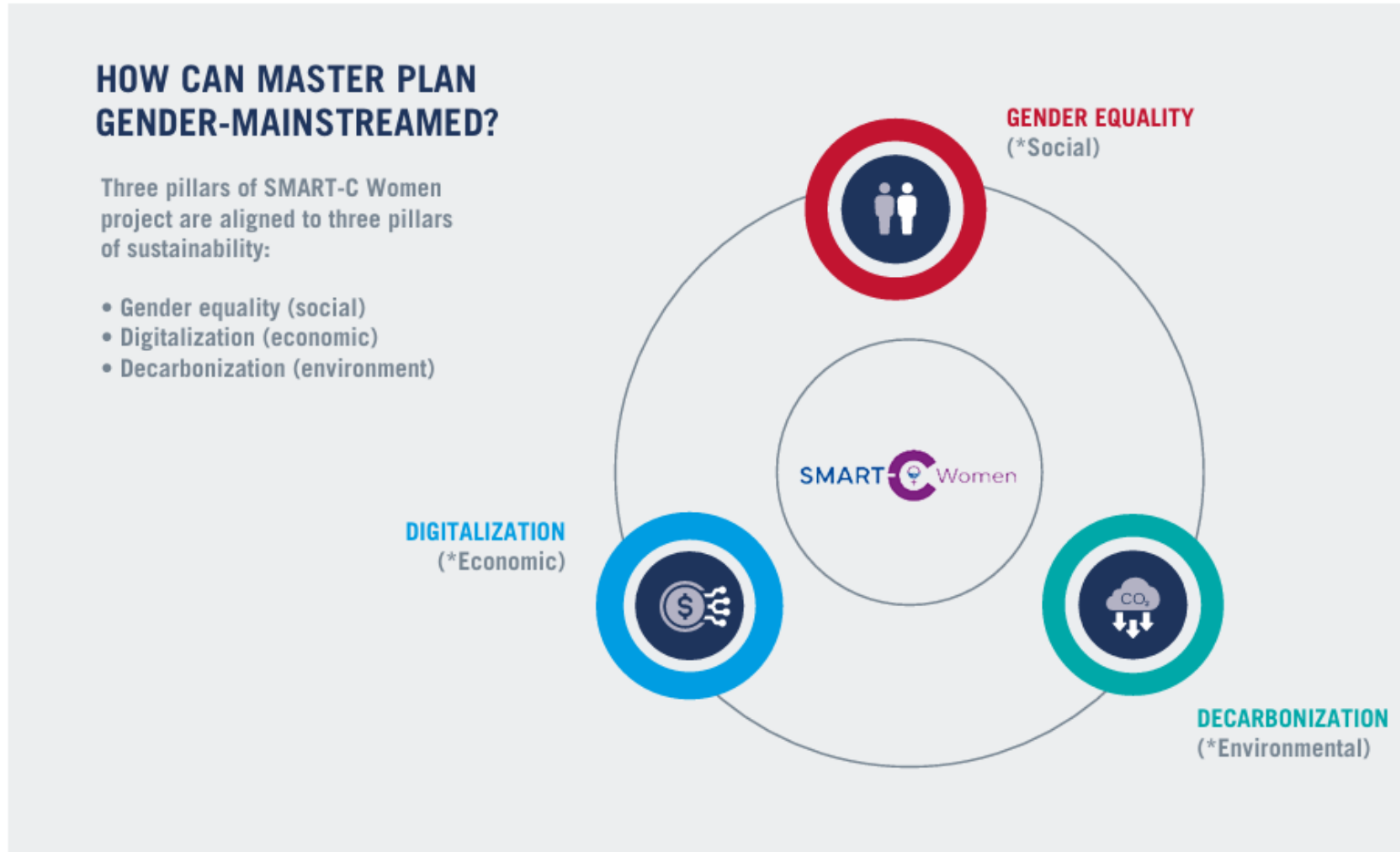
### Clean Ports Program Goals:

- **Build a foundation for the port sector to transition over time to fully zero-emissions operations, positioning ports to serve as a catalyst for transformational change across the freight sector.**
- **Reduce diesel pollution (criteria pollutants, GHGs, and air toxics) in near-port communities.**
- **Help ensure that meaningful community engagement and emissions reduction planning are port industry standard practices.**

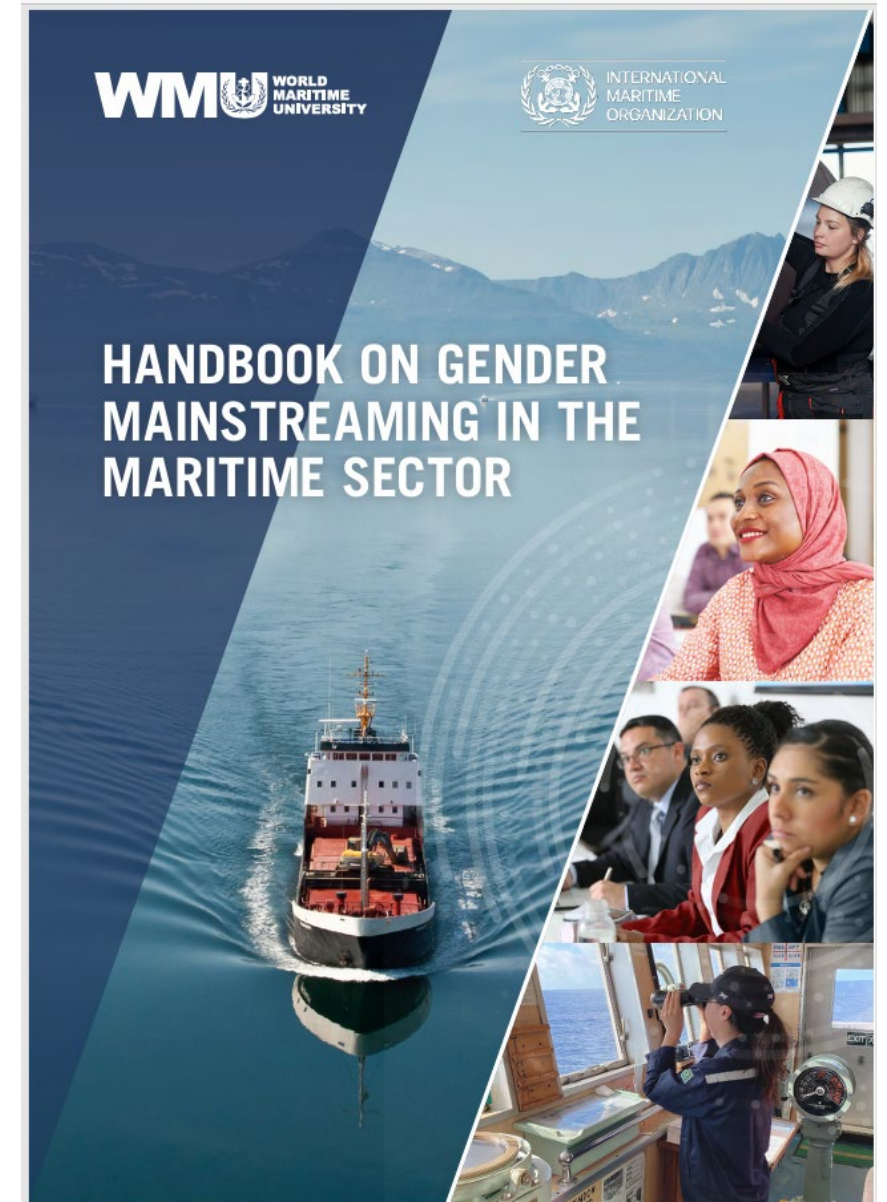


# Power Transitions for Sustainable Development

**FIGURE 23** Gender mainstreaming in three pillars of sustainability in a master plan development



Source: Kitada's lecture note



# Power Transitions for Sustainable Development



Access to justice for **all** women and girls, alongside women's safety and participation in public life.

## Justice at the Organisational Level

Justice requires institutions to:

- Embed gender equality in culture, policy, and practice
- Remove discriminatory barriers
- Ensure accountability and transparency

**Crucially:** Enable meaningful participation of ALL women and girls in decision-making.



# Creating Equal and Robust Infrastructure Improvement Priorisation Plan



Dikkatiniz için teşekkür ederim

Thank you for your attention



# Additional Information: *IMO Net-Zero Fund*

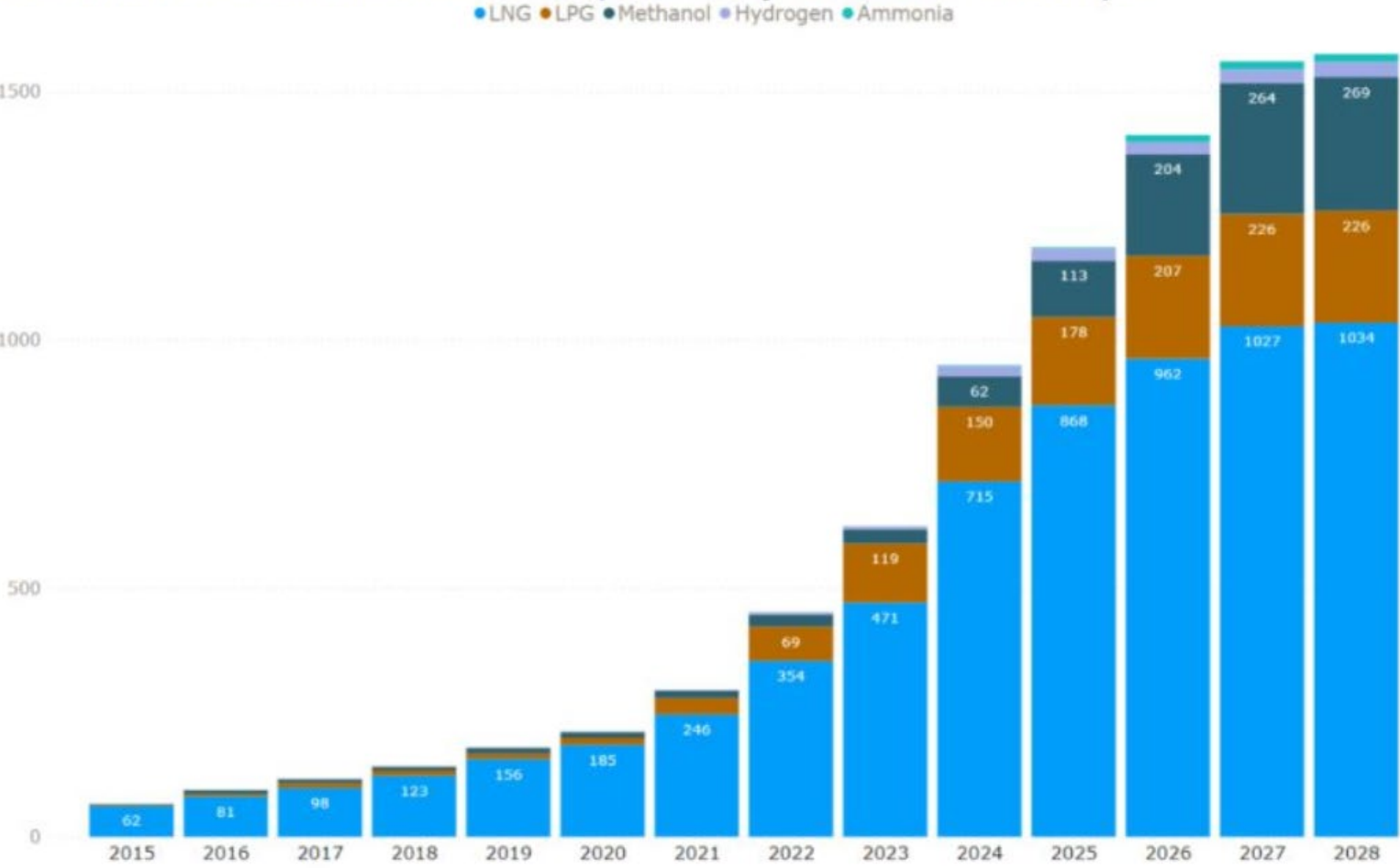


Engagement and implementation of the Net-Zero Framework Guidelines by Member States are critical to establishing successful incentives for the IMO Net-Zero Fund.

Set-up costs for the IMO GHG Fuel Intensity (GFI) Registry have the potential to be reduced by contributions made by Member States as well as other organisations with relevant expertise.

# Additional Information: *Alternative Fuels Forecast*

Growth of alternative fuel uptake by number of ships\*



DNV © 01 APRIL 2024

\*LNG carriers are not included in the LNG fueled numbers

Credit: DNV