

# DECARBONIZING PORTS

Trends and Innovations

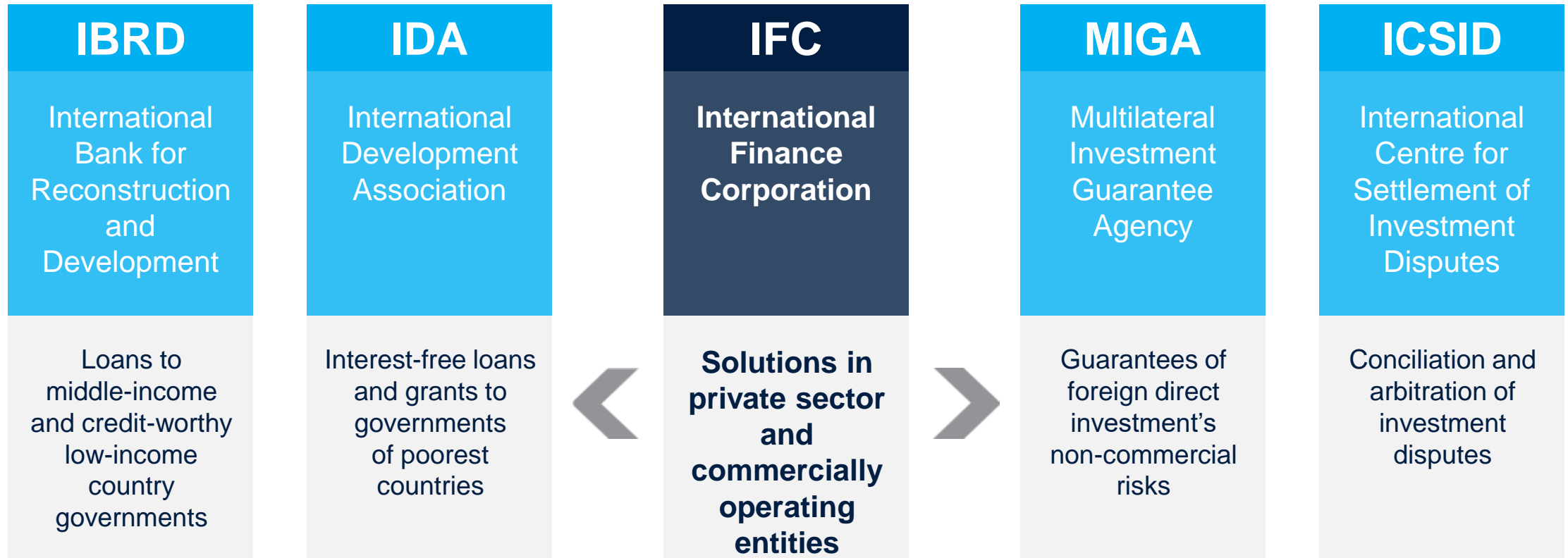
ToC Asia

Singapore, November 26-27, 2024



# Introduction: IFC

# IFC: Member of the World Bank Group



# IFC Overview & Value Proposition Addressing each stage of the Project Life Cycle

## ADVISORY

Innovative solutions combining IFC's expertise and tools

- **Advisory support on PPPs / concessions**, as well as corporate finance and M&A deals
- **Unlock investment opportunities**; strengthen clients' performance and impact; improve ESG standards
- **Corporate climate advisory** – strategic advisory on net-zero, climate risk & resilience, & just transition
- **Gender diversity and inclusion solutions**
- **Community engagement strategies**

Over 800 projects of \$1.5 billion



## PRE-INVESTMENT

Co-funding early-stage studies / pilot projects

- **Early-stage, project level development** in return for investment rights for equity and/or debt arranger role
- **Pre-feasibility studies / early technical advice**
- **Feasibility studies**
- **Early-stage equity investments**
- **Policy advocacy** with local governments
- **SLF readiness (decarbonization, and gender inclusion and diversity)**

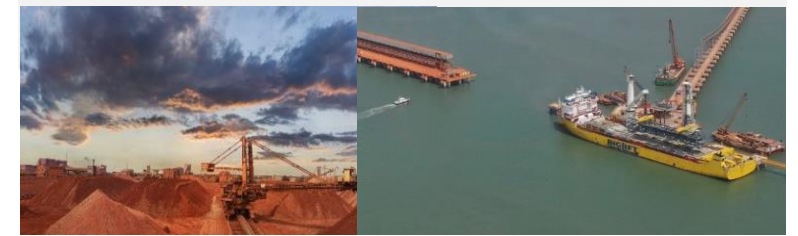


## INVESTMENT

Financial products tailored to client needs

- **Debt:** project finance, covenant-lite corporate facilities, sustainable finance products...
- **Equity:** common and preferred, convertibles...
- **Risk mitigation:** FX hedges, interest swaps, PRI and liquidity support...
- **Blended Finance**
- **Mobilization:** syndications

Over \$56 billion committed in FY24 including mobilization from other investors

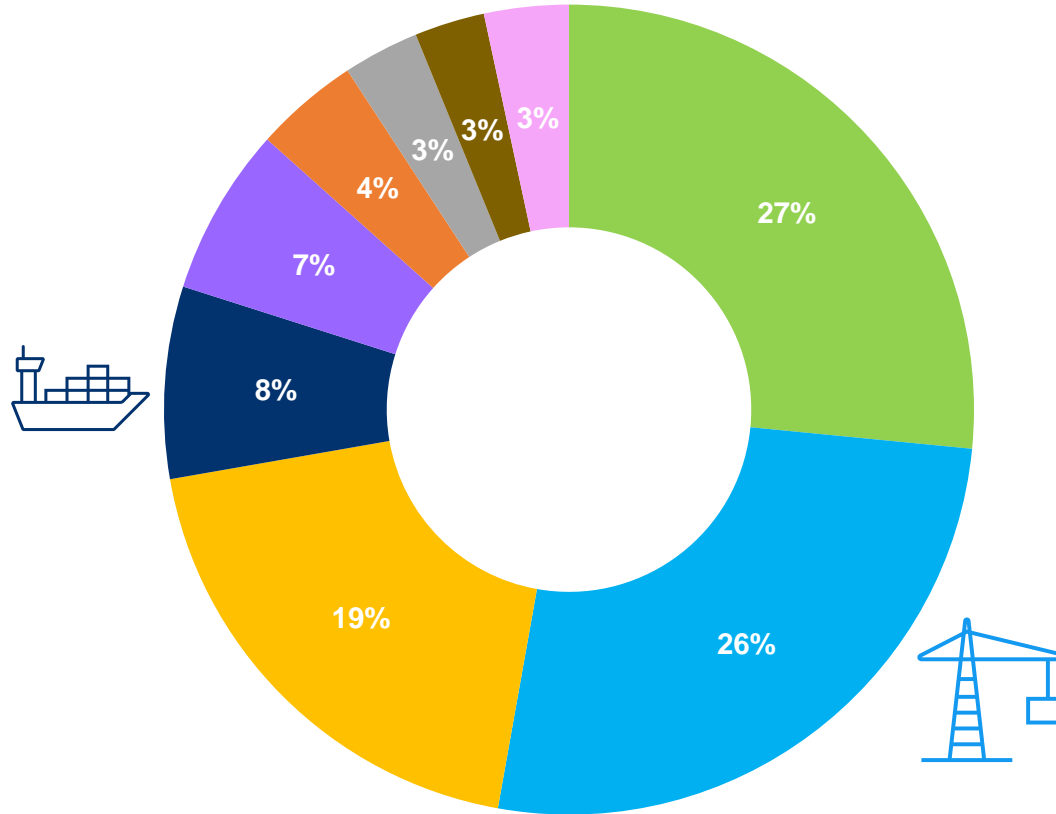


# IFC Overview & Value Proposition

Leading global institution in maritime sector finance

## IFC Committed Portfolio by Subsector:

as of June 30, 2024



## Snapshot:

- IFC Transport's commitment volumes average around **US\$1 billion** per year, not including mobilized funding from third parties
- At the end of **FY24**, IFC transport's committed portfolio is **~US\$2.9 billion**
- We are active in all transport subsectors. Ports and shipping account for **~34%** of the portfolio.

## Port Sector activity:

- The majority of port sector (~70%) financings are in the **container terminal segment**.
- Historically, private terminal financing but new SOE guidelines (2023) allow engagements with SOEs that operate commercially (i.e., Morocco).

US\$11.3 billion for IFC's own account and mobilized over the past decade.\*

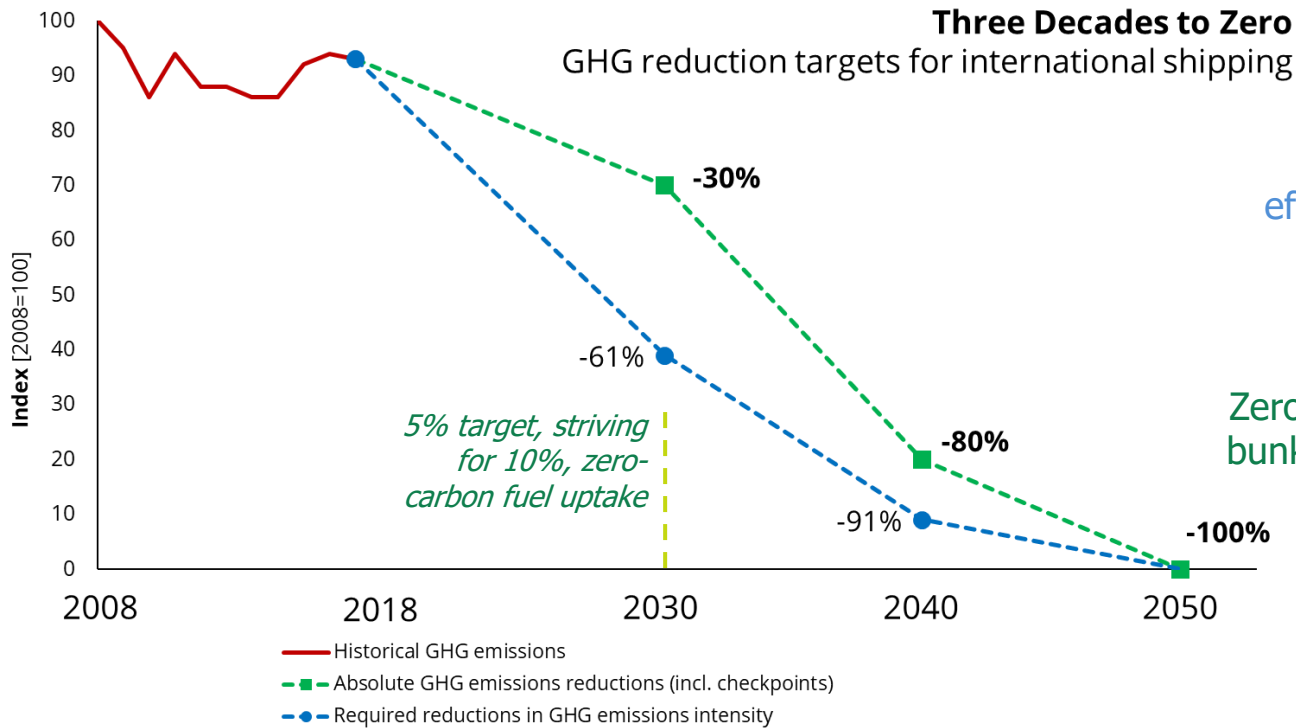
*Note: The committed portfolio for IFC's own account for end of FY24 includes outstanding and undisbursed volumes for all product categories. Last decade (FY15-24) numbers include IFC own account, core mobilization, and MIGA volumes.*

# Maritime Decarbonization

# Market Drivers of Decarbonization New 2023 IMO Strategy for net zero by 2050



The IMO has revised its GHG Strategy for more aggressive, large-scale decarbonization and adoption of zero-emission fuels.



Energy efficiency



Zero-carbon bunker fuels



## Challenges

	Regulatory
	Economic
	Technological
	Infrastructure
	Fragmentation

The IMO has signaled its firm commitment to maritime decarbonization with the new GHG strategy and enforcement of **mandatory calculations of Energy Efficiency Existing ship Index (EEXI) and Carbon Intensity Indicator (CII) ratings** for all ships >400GT from January 2023. Regulations will continue to tighten with highly probable introduction of **carbon pricing for the shipping industry in 2027**.

# Market Drivers of Decarbonization Tightening EU regulations



The EU is leading the way in decarbonization with three recent regulations that will affect the maritime sector and global trade. In response, the shipping industry may call for more alternative fuel supplies and shore power provisions. Further, the risk of decreasing exports from countries with loose emissions policies is placing pressure on other nations to follow the EU's example.

## EU Emissions Trading System (ETS)

### Summary

- 1) Emissions from all cargo and passenger ships >5,000 GT entering EU ports, regardless of their flag, are included in the overall ETS cap<sup>1</sup>, with a phase-in period from 2025-2027.
- 2) For tugboats, those >400 GT will be subject to the ETS cap from 2027. Monitoring, Reporting, and Verification (MRV) of emissions will be required from January 2025.

### Effective Date

- 1) January 2024 for CO<sub>2</sub>;  
2026 for CH<sub>4</sub> and N<sub>2</sub>O

## FuelEU Maritime

### Summary

- 1) Sets maximum, decreasing limits for yearly GHG intensity of ships >5,000 GT calling at European ports regardless of their flag.  
Current targets: 2% decrease by 2025, Up to 80% decrease by 2050
- 2) Zero-emissions required from ships at berth, which mandate use of onshore power or alternative zero-emission fuels

### Effective Date

- 1) January 2025 for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O
- 2) January 2030

## EU Carbon Border Adjustment Mechanism (CBAM)

### Summary

Implementation of a carbon price on carbon-intensive goods imported into the EU from non-EU countries. Coverage will be expanded to all sectors under the EU ETS by 2030.

### Effective Date

2026

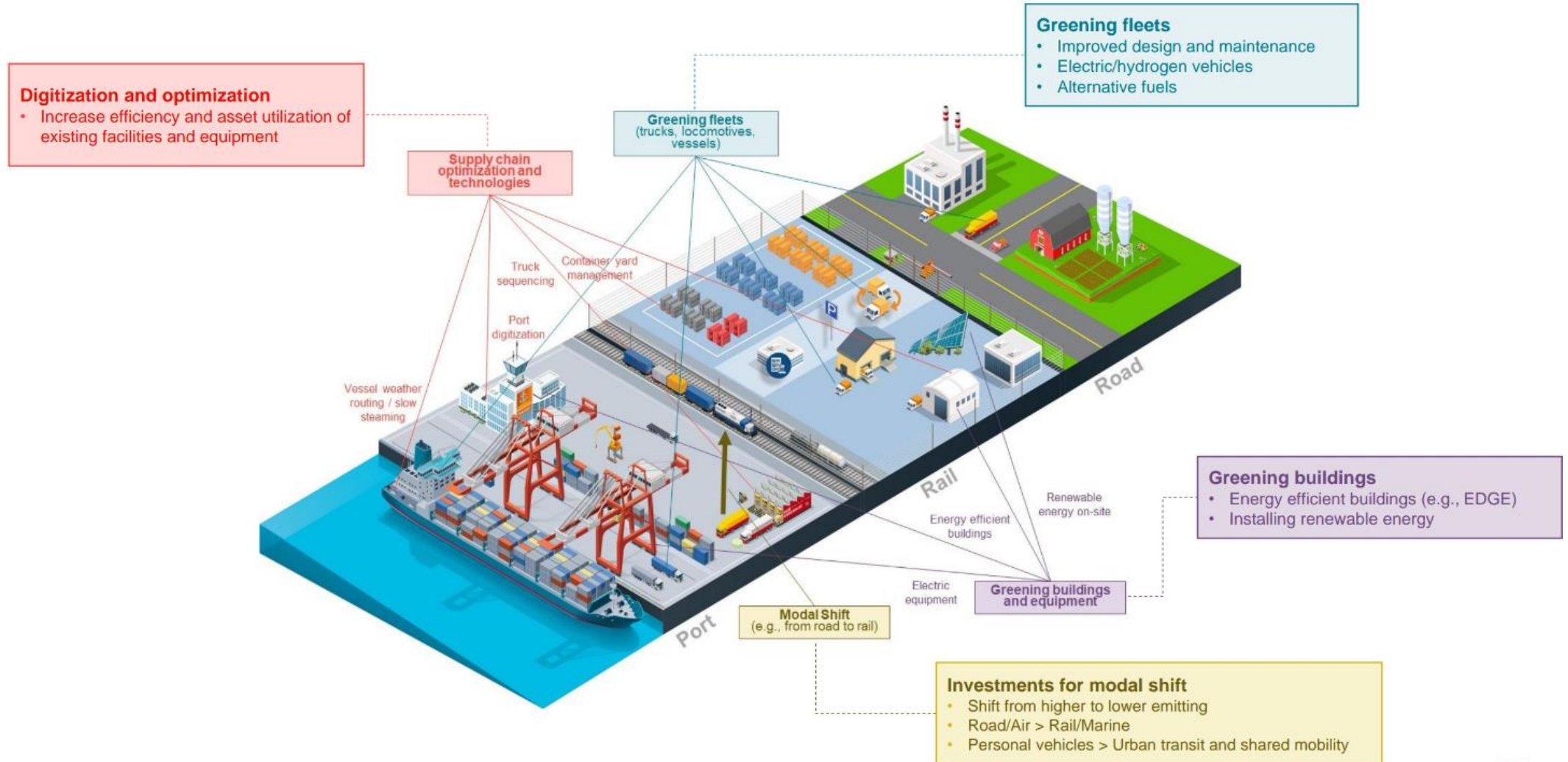
Sources: EU Commission.

Information Classification: General  
Notes: <sup>1</sup>Offshore ships >5000 GT included in scope from 2027. Offshore / cargo ships between 400-5000 GT start date TBD.



# IFC's Approach to Sustainable Maritime: Discrete opportunities to decarbonize

There are four main ways to reduce emissions in the maritime sector with associated measures (source: IFC with CPCS)



# Increased Pressure on Ports to Provide Shore Power

There has been an increase in policy pressure to encourage ports and shipping industry to adopt shore power. Some examples below.

## China



- The 'Ships and Ports' (2016-2020) plan set a target to construct 400 shore power connections by 2020 for specialized berths for containers, ro-ro passengers, cruise ships, passenger transport above 3,000 tons and dry bulk cargo above 50,000 tons on major ports and ports in the ship emission control area.
- Since 2021, cruise ships that berth for over 3hrs are required to connect to shore power.

## United States



- Beginning in 2017, California mandated that at least half of all container ships run on shore-side electricity at berth. Carriers are subject to an additional requirement: Each fleet must reduce its total emissions by 70 percent. The rule affects fleets calling at the ports of Long Beach, Los Angeles, San Diego, Oakland, San Francisco and Hueneme and applies to all operators.

## European Union



- The EU introduced the Alternative Fuels Infrastructure Regulation (AFIR), which came into force in April 2024, aims to support the rollout of adequate recharging and refueling infrastructure for low-carbon fuels.
- Under the AFIR, EU ports welcoming a minimum number of large passenger vessels or container vessels will have to provide shoreside electricity by 2030.

# Ports as energy hubs of the future

There are also opportunities to explore green power for port activities, and alternative fuel bunkering infrastructure.

## Drivers



### 2030 Fuel Target and Future Carbon Levy Mechanism

5% of energy used by shipping to be zero or near-zero fuels.  
IMO to potentially implement carbon levy mechanism by 2027.

**More decentralized bunker fuel hubs** arising from increased refueling needs due to lower energy density of zero/low-carbon bunker fuels (e.g., methanol, ammonia and hydrogen) and renewable energy capacity as a driver for alternative fuel production



### International Hydrogen Hub

- The port authority aims to be the international hub for production, import, application and throughput of Hydrogen for Northern Europe, allowing it to maintain its position as an energy port.
- The goal is to locally produce 2m tonnes and import 18m tonnes in 2050.
- Agreements with Spain and Namibia for green hydrogen imports have been signed.

### Alternative Fuel Bunkering: Ammonia

- A first pilot will be run in 2024 for the port to launch ammonia bunkering services in 2027.
- Rotterdam also provides bunkering for LNG, biofuels, Hydrogen, and methanol (barge-to-ship) with current work on GIDARA, which will produce 90kt/yr of green methanol from waste from 2026.
- Electricity-as-a-service provided for Inland shipping.



### Alternative Fuel Exploration: Hydrogen

- Development of first POC H2 use project for horizontal transportation, which includes Chiyoda's SPERA technology, a H2 refueling station, and one fuel cell prime mover. PSA aims to replace diesel prime movers with hydrogen fuel cell e-prime movers.
- Collaboration with stakeholders and agencies to create standards for hydrogen refueling stations and operations.

# IFC's Approach to Sustainable Transport A platform for partnering with clients

## IFC Offerings for Climate & Sustainability

### ADVISORY SERVICES:

- Corporate-level advisory on overall climate & sustainability strategy and KPIs
- Project-level advisory (bankability, technical feasibility, credit, ESG, etc.)
- PPP tender advisory

### PRE-INVESTMENT (UPSTREAM):

- **Project preparation support** (prior to financing)
- **Policy & Regulatory support** through WBG engagement with governments and key authorities

### OTHER VALUE ADD:

Certifications, baselining for SLFs, etc.



### FINANCING:

- **General products:** loans, equity, mezzanine
- **Sustainable finance:** green, blue, social & sustainability-linked financing

## Integrating Climate & Sustainability



Advice and project preparation support



Financing



Sharing knowledge and creating a community of practice

# TRANSACTION SUPPORT ON SUSTAINABILITY-LINKED LOAN (MOROCCO – TANGER MED)



- The Tanger Med Port is the largest container port in Africa and the Mediterranean, with extensive maritime connectivity to 180 ports and 70 countries, handling alone handles more than 50% of Moroccan exports and nearly 97% of Morocco's truck-borne export flows. It currently has a handling capacity of 9.5 million containers, 7 million passengers, 700,000 trucks and 1 million new light vehicles.
- In **FY24**, IFC committed a Sustainability-linked financing (SLF) package of **EUR200 million** from IFC's own account to the Tanger Med Port Authority (TMPA), a Moroccan SOE, who will use the **financing to add 13 new berths** for expansion of the passenger and truck port.
- This marks IFC's **first SLF extended to a port operator**.

The project will accommodate growth expectations in traffic and prevent bottlenecks, directly creating **over 6,000 jobs and indirectly generating 30,000 jobs**. The investment will also enhance trade connectivity, market integration, and economic development in the Western Mediterranean region, **solidifying Tanger Med's status as a global hub**.

## IFC's role:

- **Sustainability financing framework** development
- **Strategic support** for assessing and setting SLF KPIs and viable, but ambitious Sustainability Performance Targets (SPTs):
  - >90% Renewable Energy by 2030
  - 22% share of women managers in management by 2030
- **Coordination of Second Party Opinion (SPO)** for TMPA's SLF Framework and credibility of the transaction's KPIs and SPTs
- **Benchmarking analytics** against regional and global peers' sustainability activities and targets, concluding ambitiousness of TMPA's SPTs



# TRANSACTION SUPPORT ON GREEN LOAN (CHINA – ZHONGGU)

- Shanghai Zhonggu Logistics Co., Ltd. (“Zhonggu”) is the #1 private domestic trade multimodal container transportation company in China (ranked 13th largest container shipping company globally in terms of ship capacity)
- In FY23, IFC committed a financing package of RMB 650 million (c. US\$100 million) from IFC’s own account
- This was the first green loan extended to a container shipping company in China

## Strategic support:

- Provide guidance and expertise as the company implements Green Loan policies and practices
- Help strengthen its capacity to manage potential E&S risks in line with IFC Performance Standards (PS)

## Use of Proceeds:

- The Project will support Zhonggu to expand its multimodal service offering to serve more extensively road-rail-sea connections and provide a value-add solution to support the expansion of containerized domestic trade.



# TRANSACTION SUPPORT ON SUSTAINABILITY-LINKED LOAN (SINGAPORE – XPRESS FEEDERS )

- XPF is the largest independent feeder carrier in the world and the 17th largest container carrier in the world. XPF provides container feeder transport services, deploying smaller vessels that connect transshipment ports to outport markets.
- In **FY23**, IFC committed a Sustainability-Linked Loan (SLL) of **US\$164 million** to XPF, which includes an own account loan of **US\$70 million** and mobilization of **US\$94 million** from parallel lenders. The financing will go towards replacing older and less efficient vessels with three more fuel-efficient 7,000 TEU newbuild container vessels.

- The vessels will facilitate regional connectivity and be deployed on the China-India route, stopping at various ports in Southeast and South Asia.
- The financing is the **first SLL for XPF**, with environmental performance targets that will be applied across XPF's entire owned fleet: an **Annual Efficiency Ratio (AER)** reduction of 40% between 2019 and 2027. The AER is a carbon intensity metric, which measures ship's carbon emissions per actual capacity-distance. XPF has also committed to a 50% reduction in absolute GHG emissions by 2040, and net zero emissions by 2050.

## IFC's role:

- IFC helped XPF to structure the SLL and is helping XPF to upgrade its risk mitigation measures for **biodiversity loss, gender discrimination and gender-based violence and harassment**.





- ACP approached IFC to assess the ambition and feasibility of its climate strategy. A diagnostic revealed a solid foundation for pursuing sustainable development, but with several gaps to the strategy across climate mitigation and adaptation action.
- Given ACP's aims to be a leader in global climate action and play its part to transform the shipping sector, it appointed IFC to develop a new Climate Strategy focused on climate resilient development, making recommendations for an integrated approach to climate action spanning decarbonization, adaptation and just transition, with support to enabling factors.

## IFC's role:

- **Rapid diagnostics** on ACP's climate strategy
- Develop solid foundations for the new Climate Strategy, including a **best practice Scope 1, 2 & 3 GHG footprint** and comprehensive **climate vulnerability assessment**, setting ambitious climate and social goals and science-based targets.
- **Propose a meaningful, attainable and clear climate strategy**, with support to engage coalitions and build high-caliber partnerships, with the view to be a leading actor in climate, energy and social transition in operations and the wider maritime sector.
- **Develop a roadmap** of practical activities, actions, and milestones to reach the set targets and achieve the strategy.
- Propose organizational and governance enhancements, including **appointment of a Chief Sustainability Officer and sustainability unit**.
- Guide the **development of internal carbon pricing and ecosystem services**; and **propose a Market-Based Measure (MBM)** for the waterway to contribute to reducing maritime emissions; and propose opportunities to **monetize environmental assets**.



<https://pancanal.com/en/panama-canal-appoints-first-ever-chief-sustainability-officer/>



# ELECTRIFICATION FINANCING

## (EGYPT – SUEZ CANAL CONTAINER TERMINAL)



- Suez Canal Container Terminal S.A.E (SCCT), the largest and only container terminal in Egypt, is located at the northern end of the Suez Canal and offers favorable access to key markets in the wider Mediterranean region, Egypt, Levant, Black Sea, and Adriatic Sea.
- In **FY24**, IFC signed a **US\$175 million** own account debt financing to fund the design, construction, and operation of a 2.1 million twenty-foot equivalent unit (TEU) expansion adjacent to the SCCT's current terminal in Port Said East, Egypt.

- The project is expected to **improve operational efficiency and productivity, promote global trade, and reduce GHG emissions.**
- This transaction supports a strategic transshipment hub's expansion project, resulting in a total installed capacity of 6.1 million TEU from the current 4.0 million TEU. This will increase efficiency.

### IFC's Role:

- **Facilitating decarbonization:** SCCT will electrify port equipment, install energy-efficient LED lighting and pilot electric trucks to replace diesel trucks during the expansion's operational phase.
- IFC played a **countercyclical financing role** and helped raise **additional long-term financing** for the project at a critical time.



# THANK YOU

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