

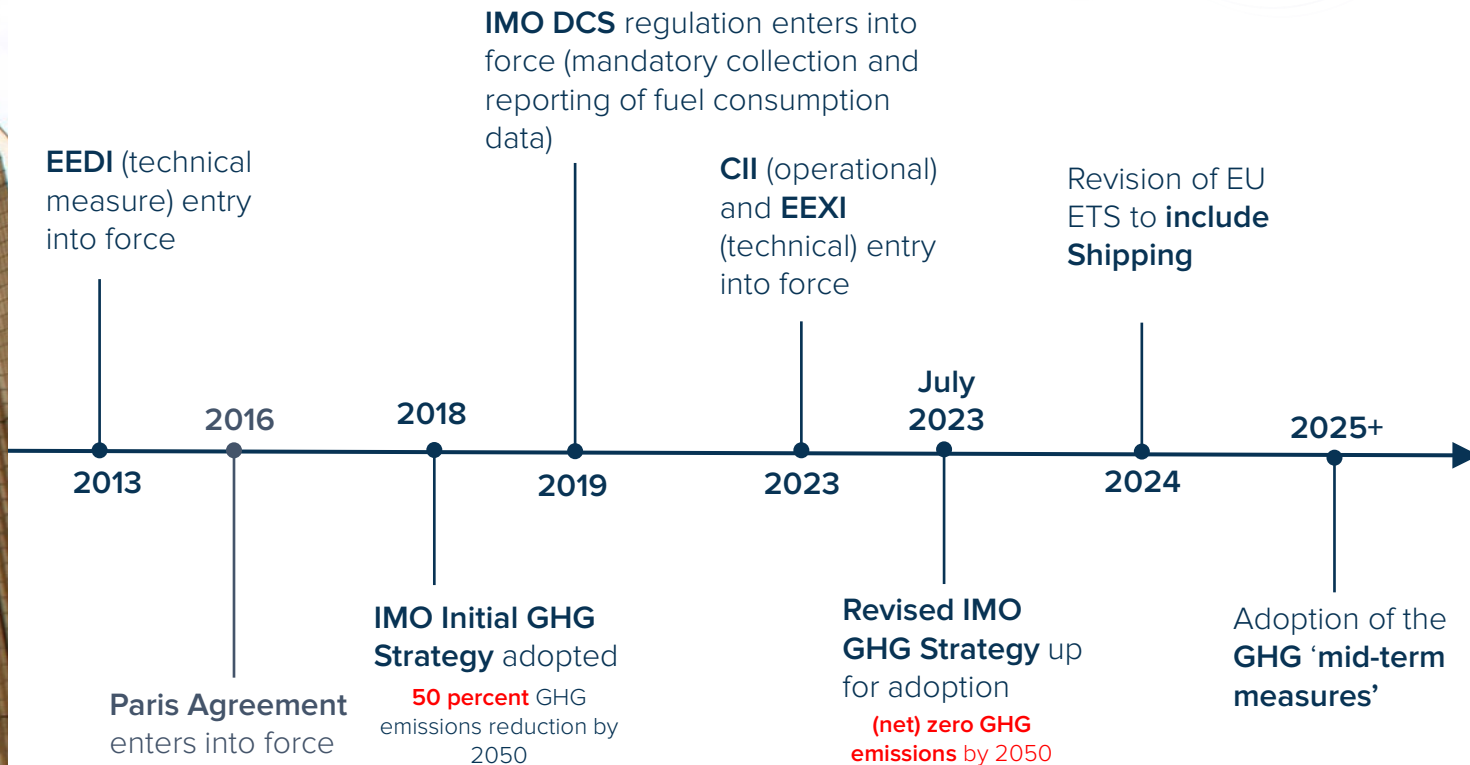
Sustainably connecting the world:

The World Bank's engagement in decarbonizing maritime sector

Yoomin Lee, Transport Global Unit, World Bank

ESMAP BBB: Hydrogen Production, the Role of Storage, and Transportation-Related Infrastructure
Thursday, 22 February 2024, 9:00 - 10:30 am

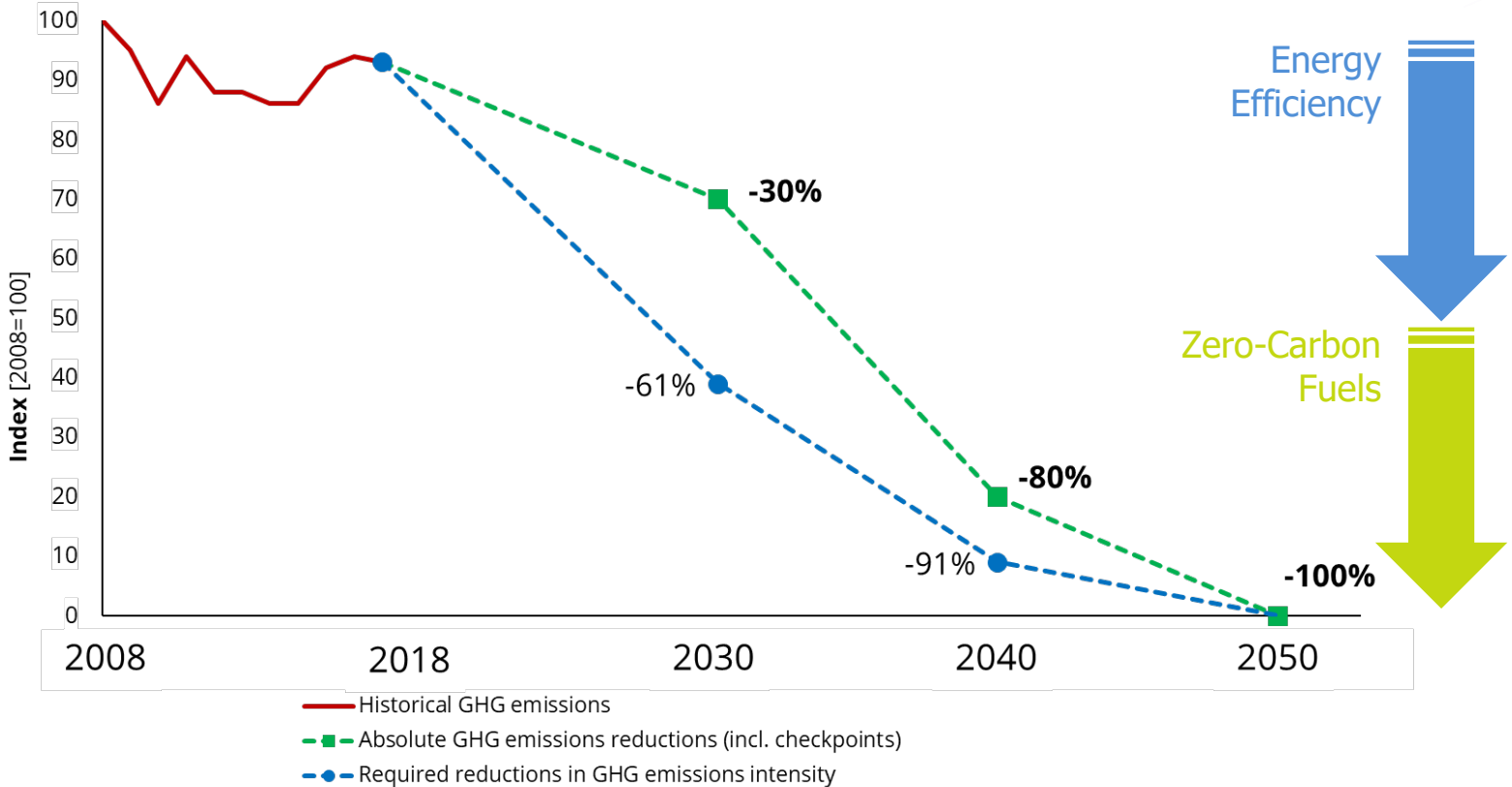
Global attempts on Decarbonization of Maritime Transport



EEDI – Energy Efficiency Design Index
EEXI – Energy Efficiency Existing Ship Index
CII – Carbon Intensity Indicator

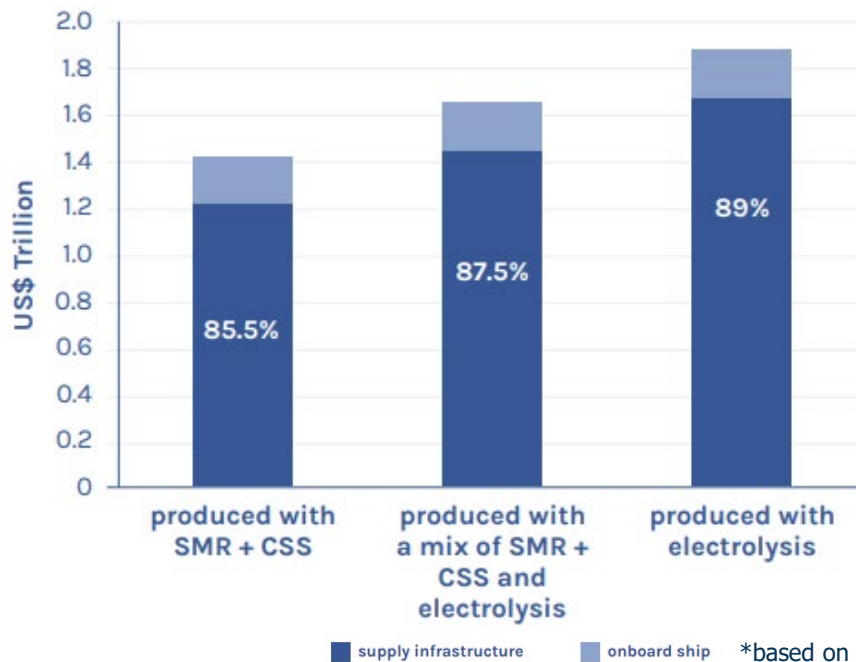
Low-Carbon Fuels for Aviation and Maritime Transport:
How to Leverage Cross-Modal Synergies to Accelerate the Transition?
February 27, 2023

Shipping's energy transition is a big challenge



Multi-trillion-dollar investment opportunities estimated

Decarbonization by 2050*



ship-based investments
(engines, on-board storage, etc.)

land-based investments
(H2 production, ammonia synthesis, tankage, bunker infrastructure, etc.)

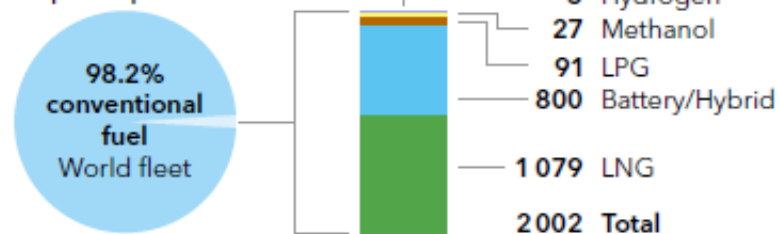
...similarly valid for synthetic carbon-based fuel options, e.g., methanol

*based on ammonia as primary bunker fuel (NH₃)

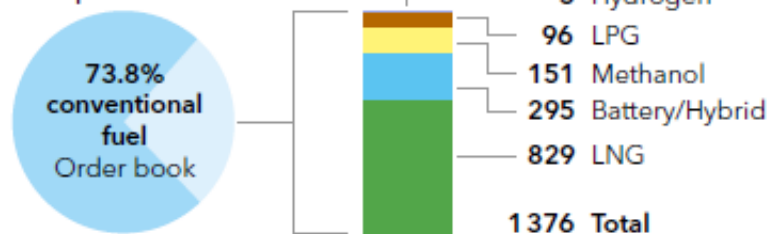
Alternative fuel uptake in the world fleet

NUMBER OF SHIPS

Ships in operation

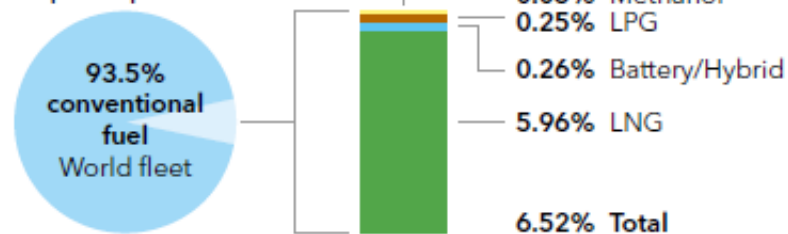


Ships on order

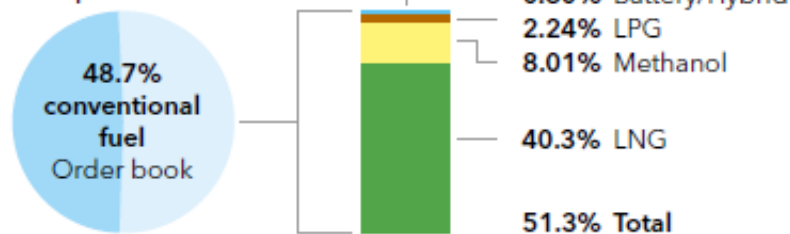


GROSS TONNAGE

Ships in operation

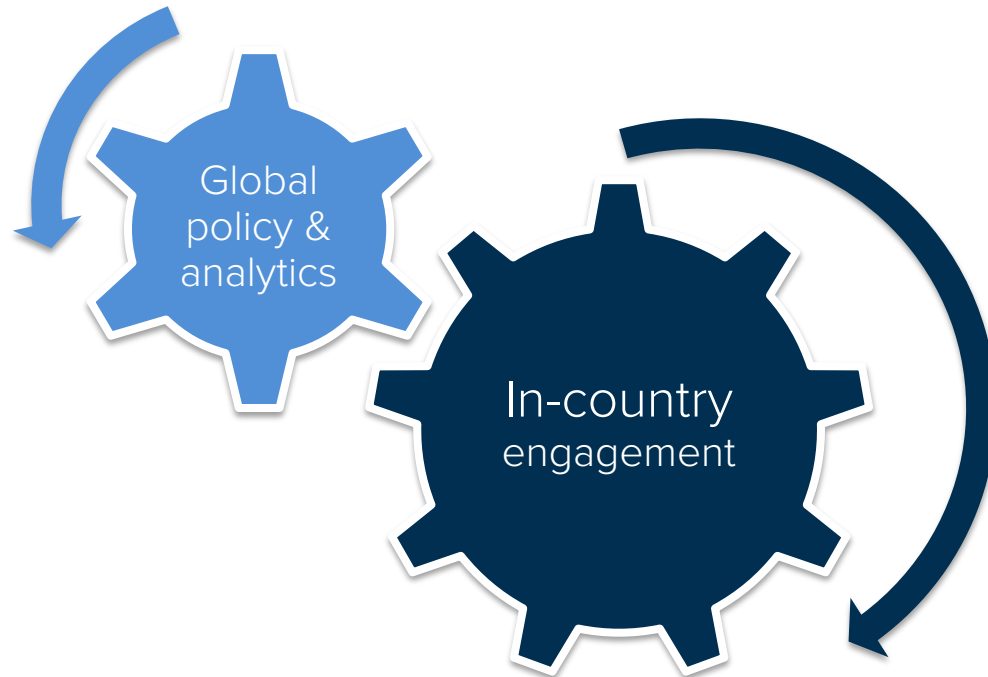


Ships on order



The WB's maritime transport decarbonization program

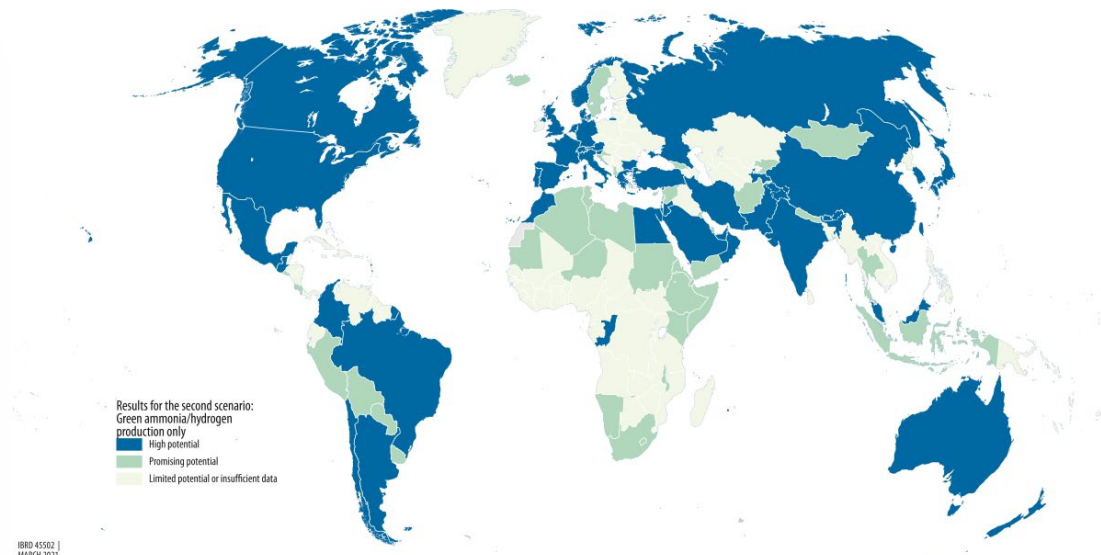
The World Bank Transport GP follows a **two-pronged approach** to help our client countries
Navigate shipping's energy transition:



Pillar I: Global analytics

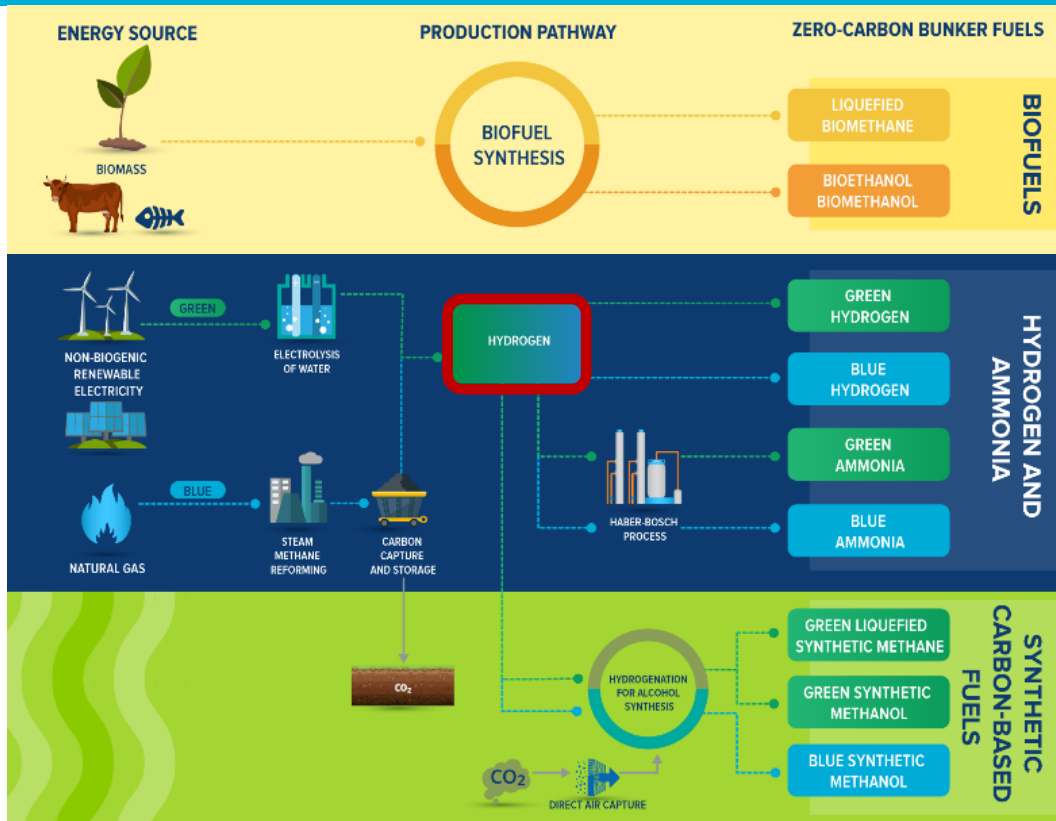


We identified **prime producers for zero-carbon shipping fuels**, such as green hydrogen, -methanol or ammonia **in the developing world** to unlock new **development opportunities** and realize co-benefits such as **clean energy and job creation**.

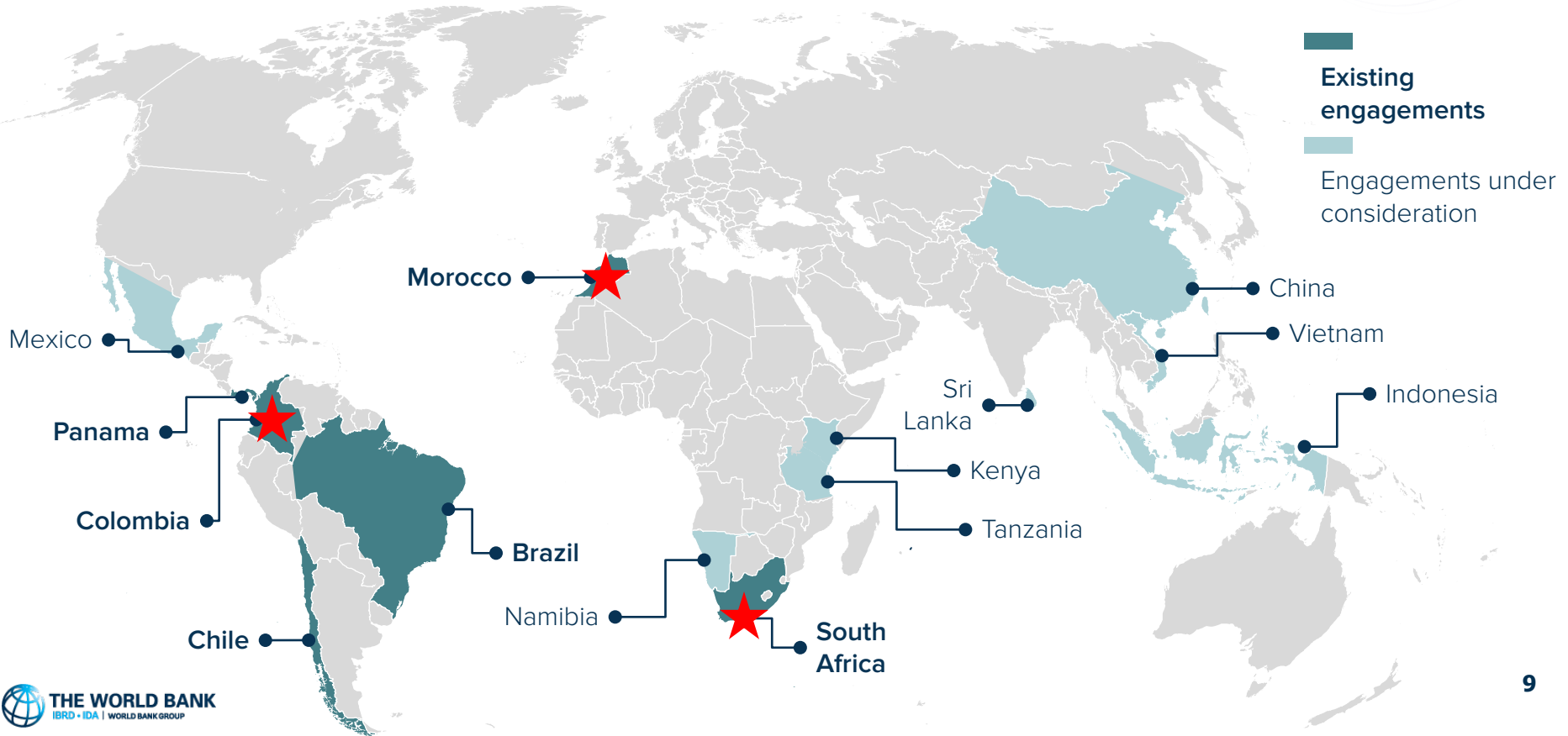


IBRD 45502 |
MARCH 2021

Green Hydrogen and Ammonia most likely to decarbonize shipping at scale



In-country engagement



Enabling synergies with other industries

...and **identify synergies with other sectors**, such as heavy industry, to **de-risk early investments** in emerging markets.

The World Bank **offers a product range** that supports the **development of large-scale infrastructure**, such as guarantees (MIGA), private sector lending (IFC) and concessional finance (IBRD).

Phased-in approach

Renewable
electricity

Green
hydrogen for
iron and steel

Green
ammonia for
export

Green
ammonia
as bunker fuel



Pillar II: IMO engagement

Analytics inform the IMO policymaking process, especially assisting low capacity developing countries with an informed, unbiased view.



INTERSESSION WORKING GROUP ON GHG EMISSIONS 10th session Agenda Item 5
 CONSIDERATION PHASE I OF T1
 Market 6

IMO INTERNATIONAL MARITIME ORGANIZATION

INTERSESSIONAL MEETING OF THE WORKING GROUP ON REDUCTION OF GHG EMISSIONS FROM SHIPS 12th session 1 April 2021 ENGLISH ONLY Pre-session public release: 02

ISWG-GHG 12/016

CONSIDERATION OF CONCRETE PROPOSALS FOR MID- AND LONG-TERM MEASURES AND ASSOCIATED IMPACT ASSESSMENTS IN THE CONTEXT OF PHASE I OF THE WORK PLAN AS WELL AS THE PROPOSAL TO ESTABLISH AN INTERNATIONAL MARITIME RESEARCH BOARD

Carbon revenues from international shipping: enabling an effective and equitable energy transition
 Submitted by the World Bank

SUMMARY

Executive summary: This document summarizes the key findings from a recent World Bank analysis, which is included in documents ISWG-GHG 12/INF 4 (Summary for Policymakers) and ISWG-GHG 12/INF 5 (Technical Paper). The initial IMO GHG Strategy lists market-based measures (MBMs) as candidate mid-term measures to reduce GHG emissions. While reducing GHG emissions, some MBMs can also raise significant carbon revenues, which allow for an additional set of actions. The analysis investigates the unique potential of revenue-raising MBMs. Based on the understanding that the strategic use of carbon revenues requires more favorable tax treatments to address equity considerations, the analysis explores three questions: i) What could carbon revenues from international shipping be used for? ii) What could be the recipients of such revenues? iii) How can adequate management of carbon revenues from international shipping be integrated?

Strategic direction, if applicable: 3
 Output: 3.2
 Action to be taken: Paragraph 14
 Related documents: Revision: MEPC 304/73; ISWG-GHG 12/INF 4; ISWG-GHG 12/INF 5; ISWG-GHG 12/INF 2; MEPC 77/74; MEPC 77/71/2; MEPC 77/16; MEPC 77/11; MEPC 77/28; MEPC 77/6; ISWG-GHG 10/52; ISWG-GHG 10/54; ISWG-GHG 10/58; MEPC 76/72; MEPC 76/12; MEPC 76/15; MEPC 76/18; MEPC 76/19; ISWG-GHG 7/81 and ISWG-GHG 0/5

ISWG-GHG 12-3-16-16-16-16-16

THE WORLD BANK
 IBRD • IDA | WORLD BANK GROUP

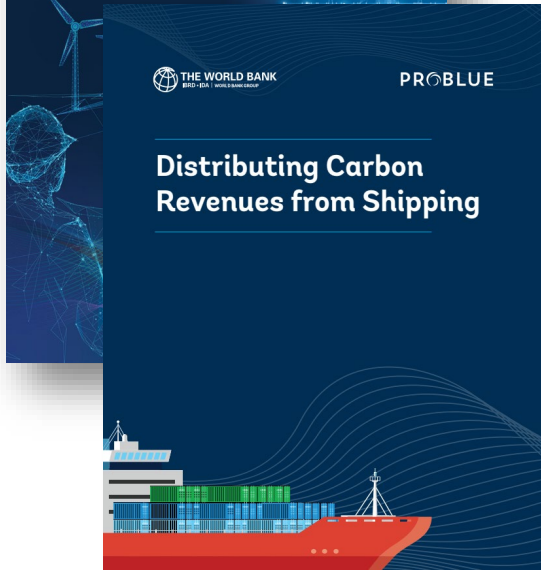
INTERNATIONAL MARITIME ORGANIZATION
 SHIPPING



Pillar III: Global policy

We are exploring the benefits of **carbon pricing to reduce emissions from ships** and **enable an equitable transition** for developing countries.

How could the money be spent in the most effective way?



Recipients

Which countries can access carbon revenues, for what purposes, on what terms?

Developed countries
 Developing countries
 SIDS and LDCs

Funding windows

Window A

Window B

Window C

Carbon revenues to

Decarbonize shipping

Enhance maritime transport infrastructure and capacity

Support broader climate aims



Stringent Financing terms Relaxed

Thank you.

Contact

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