Latest developments in IMO’s efforts to phase out GHG emissions from international shipping

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International Maritime Organization (IMO): a global regulator addressing global challenges for a global industry

United Nations Specialized Agency mandated to define a **global regulatory framework** to ensure safe, secure and efficient shipping on cleaner oceans

175 **Member States**, 3 associated members, 143 observer organizations (IGOs and NGOs)

IMO regulates > 50,000 ships trading worldwide

IMO’s instruments contain **binding obligations**, which are **enforced globally by flag and port States**

Safe, secure and efficient shipping on cleaner oceans
Context: Climate change impacts in Africa

Impacts of climate change becoming increasingly severe - developing States particularly affected
Context: Climate change also affects maritime operations

Port infrastructure and operations worldwide increasingly affected by more frequent and severe bad weather conditions (typhoons, flooding, droughts) affecting global trade.
Africa’s contribution to global CO2 emissions is relatively low — yet, expected to increase due to population and economy growth.

Source: Our World in Data based on the Global Carbon Project (2022) OurWorldInData.org/co2-and-greenhouse-gas-emissions • CC BY

1. Fossil emissions: Fossil emissions measure the quantity of carbon dioxide (CO2) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO2 includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.
Context: Shipping is the backbone of the world’s economy; transporting over 80% of total world trade

Global trade volume transported by ship continues to increase - and so are greenhouse gas (GHG) emissions if no action is taken.

Figure 1.2 International maritime trade, billions of cargo ton-miles, 2002–2022

World trade growth expected to be higher in 2022 and 2023 than prior to Covid

Despite supply chain congestion, high inflation, expensive energy, and Russia’s invasion of Ukraine, world trade is set for continual growth into 2023, forecasts DHL in global trade report.

Source: UNCTAD secretariat, based on estimates from Clarksons Research (Clarksons Research, 2022b).

- Includes iron ore, grain, coal, bauxite/alumina, and phosphate.
- Estimated.
- Forecast.
Context: Africa’s participation in global maritime trade

Africa’s participation in global maritime trade today is relatively small, but expected to raise because of rapid population and economic growth.

Figure 1.4  International maritime trade, by region, 2021
(percentage share in world tonnage)

Source: UNCTAD secretariat, based on table 1.2 of this report.
Global commitment to reduce GHG emissions: UNFCCC

2015 Paris Agreement:

- limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels
- States to submit National Determined Contributions (NDCs) identifying increasingly ambitious national climate action
- GHG emissions from shipping to be reported separately: international action to reduce GHG emissions from international shipping to be undertaken by IMO
IMO’s commitment following the 2015 Paris Agreement: 2018 IMO Initial GHG Strategy to reduce GHG emissions from international shipping
Initial IMO GHG Strategy: IMO’s existing strategic objectives in reducing GHG emissions from international shipping

2018 Initial IMO GHG Strategy

**Vision**
- To phase out GHG emissions from international shipping as soon as possible in this century

**Levels of ambitions**
- Further strengthen energy efficiency design requirements for ships
- **2030**: reduce carbon intensity by at least 40%, compared to 2008
- **2050**: reduce total GHG emissions by at least 50%, compared to 2008

**Other key elements**
- Impacts on States of candidate GHG reduction measures to be assessed before adoption
- Initial Strategy to be revised by 2023
IMO’s global regulatory framework aimed at decarbonizing international shipping and ensuring a global level-playing-field

Over 10 years of mandatory IMO energy-efficiency requirements in MARPOL Annex VI

.1 Since 2013: ships to have a Ship Energy Efficiency Management Plan (SEEMP) on board

.2 Since 2015: Energy Efficiency Design Index (EEDI) for new built ships

.3 Since 2019: Ships over 5,000 gt to report annual fuel consumption data to IMO Fuel Consumption Data Collection System (IMO DCS)

.4 Since 2023: all ships to comply with Energy Efficiency Operational Index (EEXI) and Carbon Intensity Indicator (CII)
Despite IMO energy efficiency requirements, further action in reducing GHG emissions from international shipping is needed.
Towards the decarbonization of shipping: energy efficiency measures alone will not be enough and new fuels are required.

Liquid hydrogen as shipping fuel | Pioneering intercontinental H2 carrier gets technical green light

Kawasaki Heavy-designed vessel engineered to store 100 times more hydrogen than shipbuilder’s Suizo Frontier, which delivered world’s first liquefied H2 cargo in early 2022.

Op-Ed: Putting Bio-LNG and Synthetic LNG Into Focus

Shipping giant Maersk to become major green hydrogen consumer as it embraces methanol fuel

Danish company has ordered 12 methanol-powered container vessels from shipbuilder Hyundai Heavy Industries.

Rio Tinto and BP Starting Year-Long Sustain Trial of Biofuels

RTM Tasman loading at Iron Ore Company of Canada’s Sept-Iles port in Quebec, during the first trial voyage using biofuel.

Shipbuilders Make Progress with Designs for Ammonia-Fueled Ships

Mitsubishi completed designs for a LPG-fueled gas carrier that it says will be simple to convert to ammonia (Mitsubishi Shipbuilding).
IMO’s further commitment to global climate action

2023 is a crucial year for IMO in defining the global shipping’s industry pathway to decarbonization:

• Important decisions to be made by MEPC 80 (July 2023)
• Everyone to be involved: leaving nobody behind

Adoption of the 2023 IMO GHG Strategy

Defining a basket of mid-term GHG reduction measure, including both technical and economic elements

Adoption of IMO Life-cycle GHG assessment guidelines to facilitate uptake of alternative marine fuels
MEPC 80 (July 2023) to adopt the 2023 IMO GHG Strategy

IMO member States have agreed to revise the IMO GHG Strategy in all its elements, including a strengthened level of ambition.

Main outstanding issues in revision of IMO GHG Strategy:

- **Phase out date of emissions from international shipping:**
  - 2050? Net-zero? Zero?

- **Intermediate targets**
  - 2030, 2040?

- **How to ensure a “just and equitable” transition**
  - Assessing and addressing impacts on States
  - Collecting and distributing revenues from an economic measure
  - Supporting technology transfer and capacity building

- **Supporting 1st movers whilst ensuring a global level-playing-field**
  - Role for maritime corridors?
Developing a basket of mid-term IMO GHG reduction measures

Next Steps

- MEPC 80 to agree on the ‘basket’ of mid-term measures, containing both technical and economic elements

- Some convergence noted on a “GHG fuel intensity regulating standard in combination with a mandatory levy/contribution”; to be further considered/confirmed by MEPC 80

- The basket should incentivize/reward use of low/zero carbon fuels while generating funds to address identified negative impacts

- MEPC 80 to initiate a comprehensive impact assessment of the basket?

- MEPC to further consider the collection and use of carbon revenues to support maritime projects in developing States
Exploring opportunities in decarbonizing maritime transport

How can the 2023 IMO GHG Strategy and the basket of mid-term measures create opportunities in Africa?

- An ambitious IMO GHG reduction target for international shipping will send strong signal to renewable fuel producers to invest in production capacity in Africa.

- An IMO 2050 reduction target for international shipping would not prejudice national GHG reduction targets.

- Development of an economic measure will generate revenues to support developing States mitigating negative impacts of an IMO measure, e.g. supporting port infrastructure, re-skilling, yard/retrofitting capacity.

- Decarbonization of shipping could accelerate the transition to a broader national low-carbon economy.
Supporting opportunities in Africa

Job creation and attracting investments in the renewable energy sector

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**FURTHER AFRICA**

6 African countries launch the Green Hydrogen Alliance

Six African nations have formally launched the Africa Green Hydrogen Alliance. They include South Africa, Kenya, Egypt, Morocco, Namibia and Mauritania.

- The Africa Green Hydrogen Alliance targets accelerating the transition from fossil fuels overreliance that has made the continent reluctant, as fossil fuels drive most economies in the continent.
- Green hydrogen could provide Africans with new access to cleaner energy sources, employment opportunities, public health benefits due to cleaner air, GDP creation and export revenues outside Africa.

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**Source: International Energy Agency (IEA) – World Energy Employment report**

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**UNCTAD**

Vulnerable countries need help to adjust to carbon cuts in maritime transport

05 July 2021

Technical and financial assistance to poorer nations will help alleviate the costs of a planned transition to low-carbon shipping.
IMO’s GHG regulatory agenda

**Next meetings**

**Expert Workshop on mid-term measures (25-26 May 2023)**

- revision of the Initial GHG Strategy
- further consideration of proposals for future technical and economic GHG reduction measures
- consideration of draft IMO GHG Life-cycle guidelines

**Expected deliverables at MEPC 80 (3-7 July 2023):**
- adoption of the 2023 IMO GHG Strategy
- agreement on the outline of a “basket” of next GHG reduction measures with technical and economic elements to be developed as a priority
- Initiate a high-level analysis of possible impacts of the basket?
- Further consideration of collection/use of carbon revenues in developing States