



SUSTAINABLE SHIPPING  
FOR A  
SUSTAINABLE PLANET

# Climate change impact on Pacific Ports and Future Sustainability

*26 August 2021*

**Roel Hoenders**  
**Head, Air Pollution and Energy Efficiency**  
**Marine Environment Division, IMO Secretariat**

Source:  
Cook Islands Economic Development Strategy 2030

# The International Maritime Organization (IMO)



UN Specialized Agency mandated to set a **global regulatory framework** to ensure safe, secure and efficient shipping on cleaner oceans



IMO Convention adopted in 1948; since then IMO put in place more than 50 international instruments, such as SOLAS and **MARPOL**



**HQ** in London

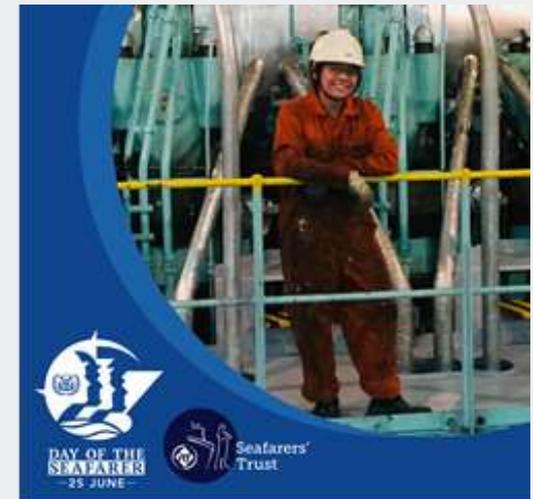
**174** Member States & 3 associated members  
**143** observer organizations (IGOs and NGOs)



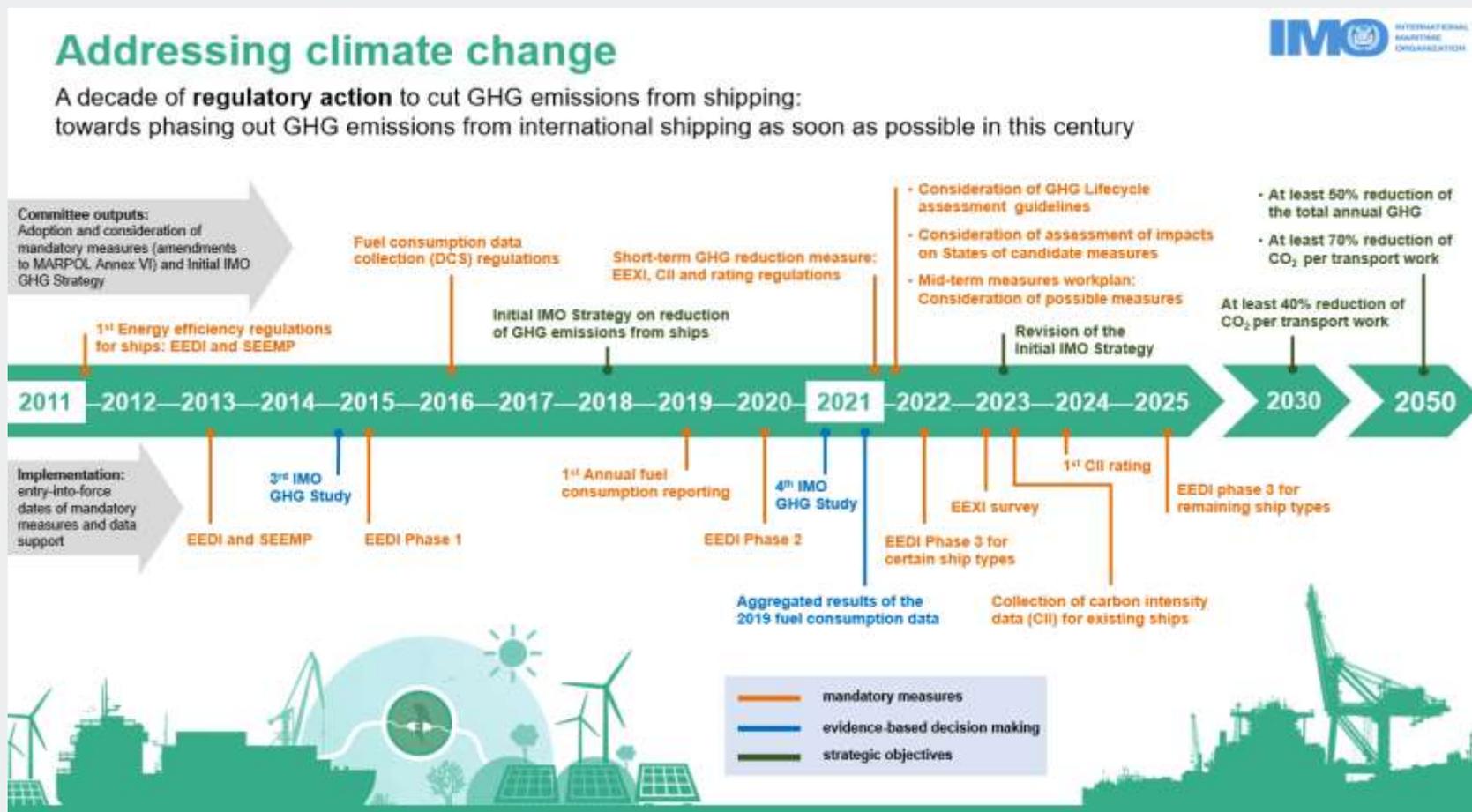
IMO regulates the over **50,000** merchant ships trading worldwide



**IMO stands for safe, secure and efficient shipping on cleaner oceans**



# Greenhouse Gas (GHG) reduction from international shipping: 10-years of mandatory IMO energy-efficiency requirements



See: <https://www.imo.org/en/MediaCentre/HotTopics/Pages/Cutting-GHG-emissions.aspx>

# Mandatory energy efficiency requirements in IMO's MARPOL Annex VI

Requirements that apply to all internationally operating ships:  
to be controlled by flag States and port State control (PSC)

## Ship Energy Efficiency Management Plan (SEEMP)

- As of **2013**: Each ship shall have a ship-specific SEEMP on board

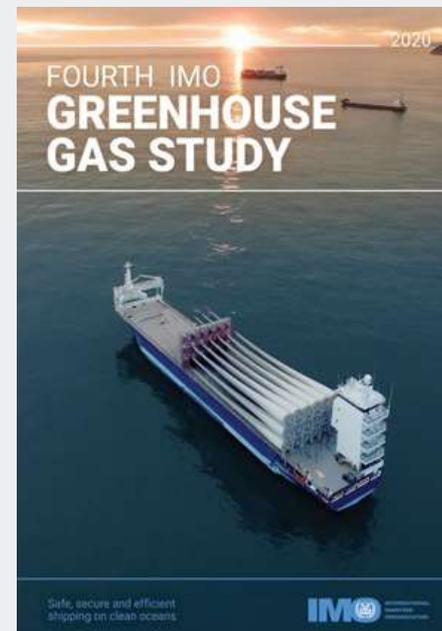
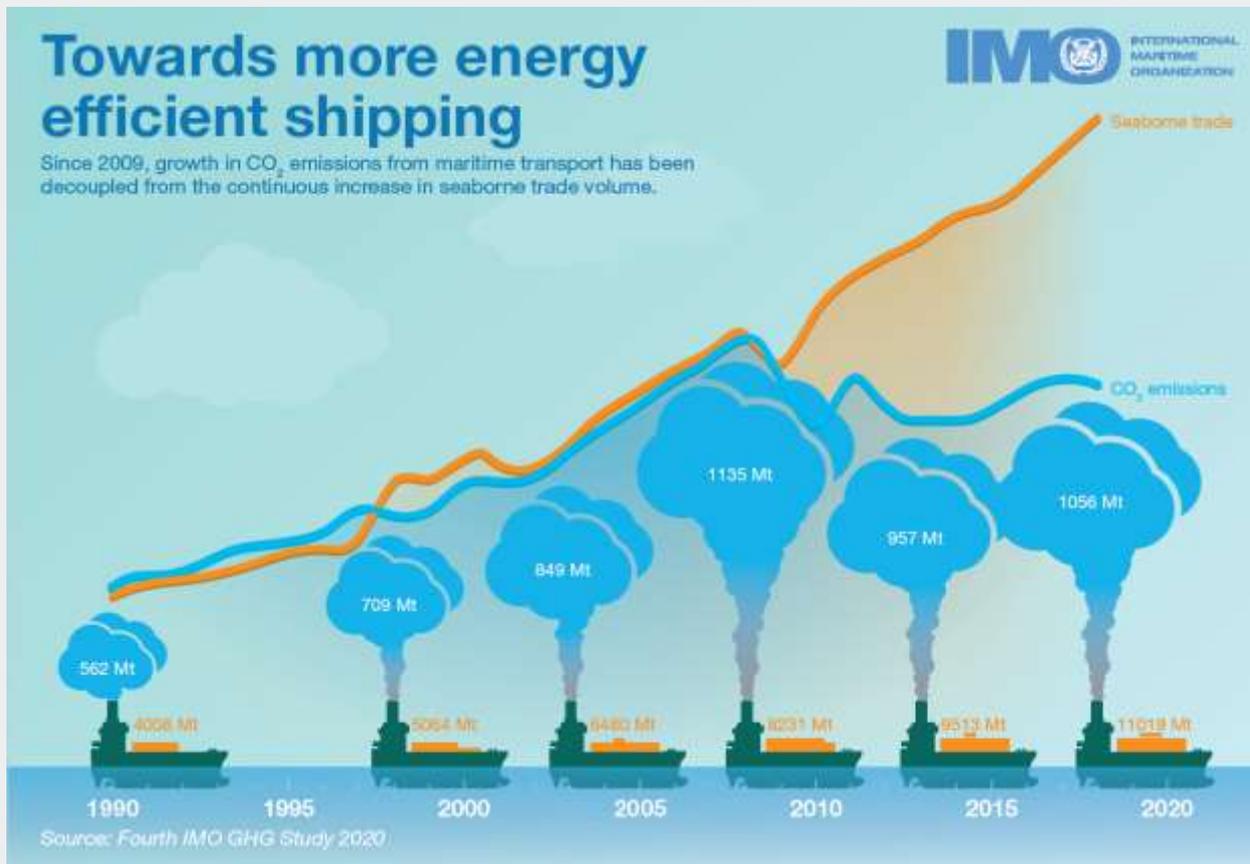
## Energy Efficiency Design Index (EEDI)

- Gradually more stringent energy efficiency improvements required for **new build** ships under subsequent EEDI phases
- EEDI Phase I took effect in 2015, and strengthened since then

## IMO's Fuel Consumption Data Collection System

- Ships to report **annual fuel consumption data** to their Administration, which is forwarded to IMO
- 2019 fuel consumption data received from **107 Administrations** for **27,221 ships (1,187 m Gt)**
- **213 million tonnes of fuel** (quantity basis) used in 2019

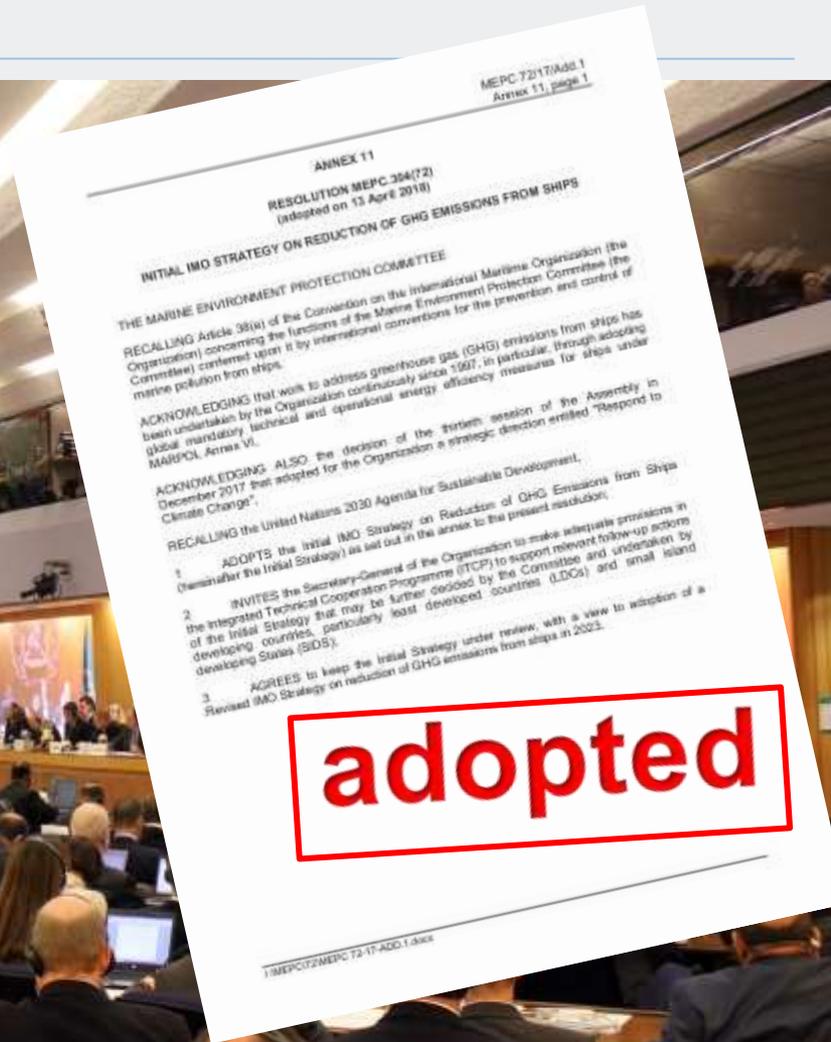
# Since 2009, CO2 emissions from international shipping have been decoupled from the growth in seaborne trade



[Downloadable from the IMO website](#)

**Shipping's share of global emissions in 2018: 2.89%  
(up from 2.76% in 2012): More action is needed!**

# IMO's Initial Strategy on Reduction of GHG emissions from international shipping of April 2018



## IMO's Initial GHG Strategy: levels of ambition

### 2030 level of ambition:

- Reduce **carbon intensity** of international shipping by **at least 40%** compared to 2008

### 2050 level of ambition:

- Reduce **total GHG emissions** of international shipping by **at least 50%** compared to 2008

### IMO's Initial Strategy:

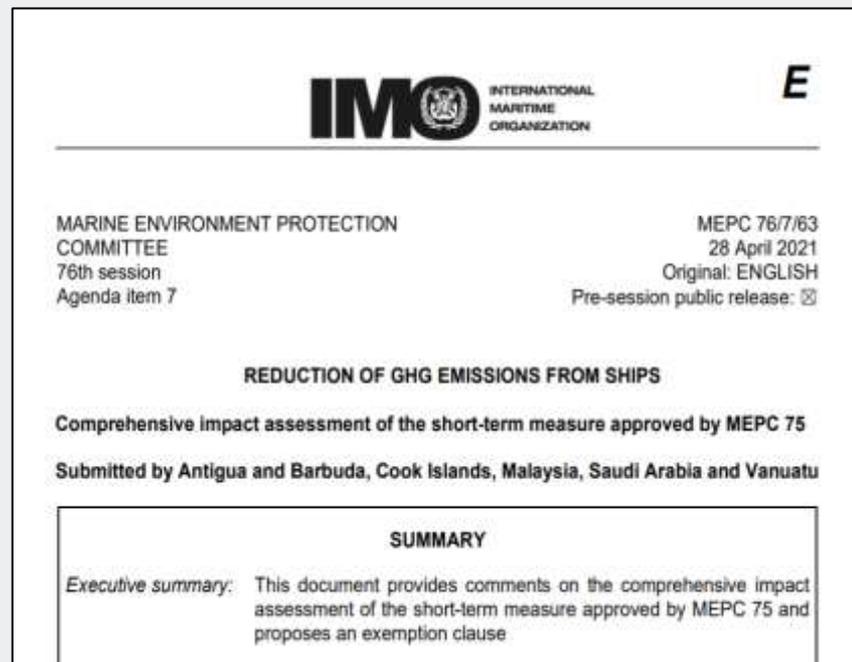
“4.10 The **impacts on States** of a measure should be assessed and taken into account as appropriate before adoption of the measure. **Particular attention should be paid to the needs of developing countries, especially small island developing States (SIDS) and least developed countries (LDCs).**”

# IMO's Initial GHG Strategy: Importance of assessing impacts of IMO measures on States

**IMO Impact Assessment of the new short-term GHG reduction measures for ships (to enter into force on 1 November 2022):**

“Countries that are **affected the most** by climate change impacts, in particular **economies in SIDS and LDCs**, are **already facing high shipping and trade costs** with their trade depending almost exclusively on maritime transport to access regional and global markets.

[f]or some countries the negative impacts of the IMO measure assessed in this report are higher than for others. Aware of the resource constraints of some developing countries, **including SIDS and LDCs**, UNCTAD expects that **some countries will likely require support to mitigate the increased maritime logistics costs and alleviate the consequent negative impact on their respective real income and trade flows.**”



# Active participation of Pacific Islands in IMO climate discussions

## Pacific islands call for zero carbon shipping by 2050, citing IPCC report

Published on 23/08/2021, 4:41pm

Three Pacific nations want to reopen talks on the long term climate target at the International Maritime Organization, urging higher ambition



House with a sea wall in front of it in Kiribati (Photo: Christian Aslund/Greenpeace)

By Joe Lo

Three climate vulnerable Pacific nations have asked the world's governments to agree to aim to make international shipping emissions-free by 2050.



MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
77th session  
Agenda item 7

MEPC 77/7/3  
20 August 2021  
Original: ENGLISH

Pre-session public release:

### REDUCTION OF GHG EMISSIONS FROM SHIPS

Resolution on zero emissions no later than 2050

Submitted by Kiribati, the Marshall Islands and Solomon Islands

#### SUMMARY

*Executive summary:* This document proposes that the Committee – in recognition of the recent reports of the IPCC – recognizes that international maritime transport must reach zero GHG emissions no later than 2050

See:

<https://www.climatechangenews.com/2021/08/23/pacific-islands-call-zero-carbon-shipping-2050-citing-ipcc-report/>

# Support to implementation of IMO regulations: GMN-MTCC Project

- EU and IMO partnership project launched in 2016
- Focused on reducing GHG emissions from the shipping and supporting IMO's Initial GHG Reduction Strategy – LDCs & SIDS
- A network of 5 Maritime Technology Cooperation Centre's (MTCC's) established in - Africa, Asia, Caribbean, Latin America and **Pacific**
- <http://mtccpacific.spc.int/>



The image shows the cover of a workshop report. At the top, there are logos for GMN (The Global MTCC Network) and MTCC PACIFIC (Maritime Technology Cooperation Centre). Below the logos, the text reads 'MARITIME TECHNOLOGY COOPERATION CENTRE IN THE PACIFIC (MTCC-PACIFIC)'. The main title of the report is 'SOLOMON ISLANDS NATIONAL WORKSHOP ON ENERGY EFFICIENT OPERATIONS OF SHIPS', held in Honiara, Solomon Islands, from 13-15 February, 2018. The cover features a photograph of a large ship docked at a pier with cranes. At the bottom, there are logos for the European Union, IMO, Pacific Community, and SPREP. A small text block at the very bottom states: 'The Global MTCC Network (GMN) project is funded by the European Union and implemented by the IMO. This publication was produced with the financial assistance of the European Union. The contents of this publication are the sole responsibility of MTCC-Pacific and can in no way be taken to reflect the views of the European Union.'

# Support to implementation of IMO regulations: GreenVoyage 2050

- 12 lead partner countries (including **Cook Islands and Solomon Islands**)
- Support implementation of IMO GHG Strategy and Resolution to encourage **cooperation between shipping and ports**
- Support development and adoption of **National Action Plans (NAPs)** on GHG reduction from shipping and ports
- Capacity building activities on low carbon shipping and clean ports
- **Technology cooperation, innovation and pilot demonstration (shipping and ports)**
- Support development of port emission inventories and port emission reduction strategies
- [Greenvoyage2050.imo.org](http://Greenvoyage2050.imo.org)



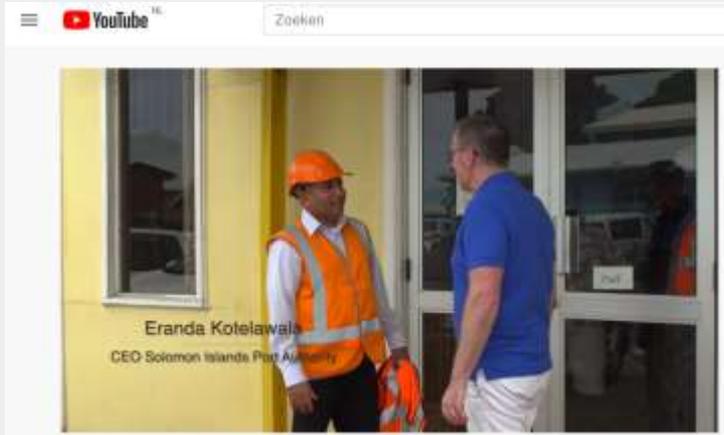
# Opportunities for ports in future alternative fuel production for shipping

- IMO's future GHG reduction measures will require ships to **move away from fossil bunker fuels (HFO)** and take-up alternative, low-carbon fuels, like, renewably produced ammonia/hydrogen/methanol/batteries
- **Pacific Islands ports** could assess costs/benefits of **linking domestic renewable energy projects to low-carbon maritime fuel supply** to possibly scale-up projects and attract climate finance for ports and domestic fleet



volume  
1

THE POTENTIAL OF  
ZERO-CARBON BUNKER FUELS  
IN DEVELOPING COUNTRIES



Thank you for your attention

15 May 2019

## Global problem, local actions

GMN The Global 1000 Network

13 CLIMATE ACTION