IMO's action toward GHG emissions reduction

13 November 2019 Hideaki SAITO Chair, IMO/MEPC



International Maritime Organization (IMO)



- ✓ <u>IMO</u>: a specialized agency of the United Nations which is responsible for measures to improve the safety and security of international shipping and to prevent pollution from ships
- ✓ <u>History</u>: Established in 1958, Headquarters in London
- ✓ <u>Memberships</u>: 174 Member States, three Associate Members, 64 intergovernmental organizations, 81 international non-governmental organizations

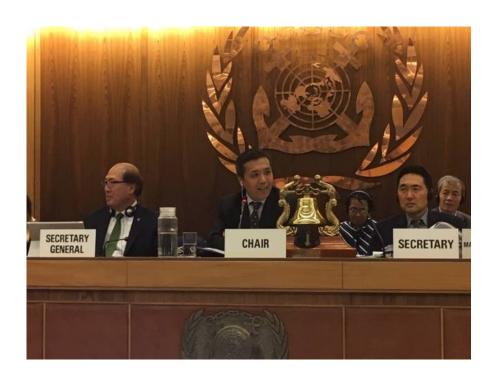


Marine Environment Protection Committee (MEPC)



- ✓ MEPC has a role to address environmental issues, and to discuss and develop measures among member States based on MARPOL Convention.
- ✓ Main agenda items in recent years include:
 - Greenhouse Gas emission
 - Sulphur Oxides
 - Nitrogen Oxides
 - Ballast water management
 - Marine plastic litter etc.



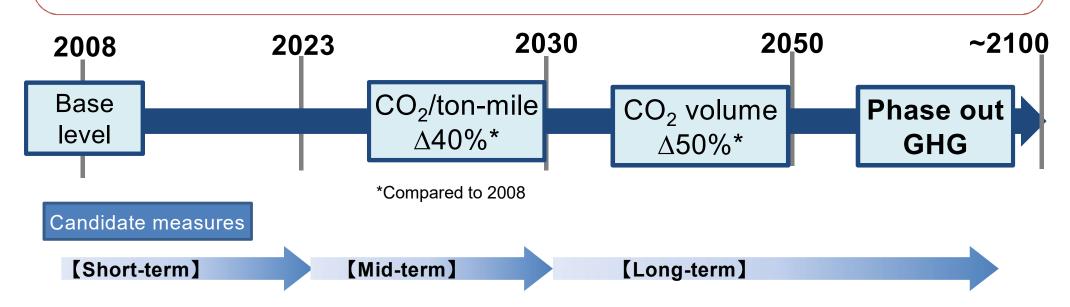






IMO adopted the GHG Strategy in April 2018

The first global commitment by an industrial sector, without differentiation amongst the countries



etc.

Market-based Measures

- Design improvement (e.g. strengthening EEDI*1) • Low-carbon fuels
- Operational improvement (e.g. strengthening SEEMP *2)
- National Action Plan etc

- Zero-carbon fuels
- Other possible new/innovative measures

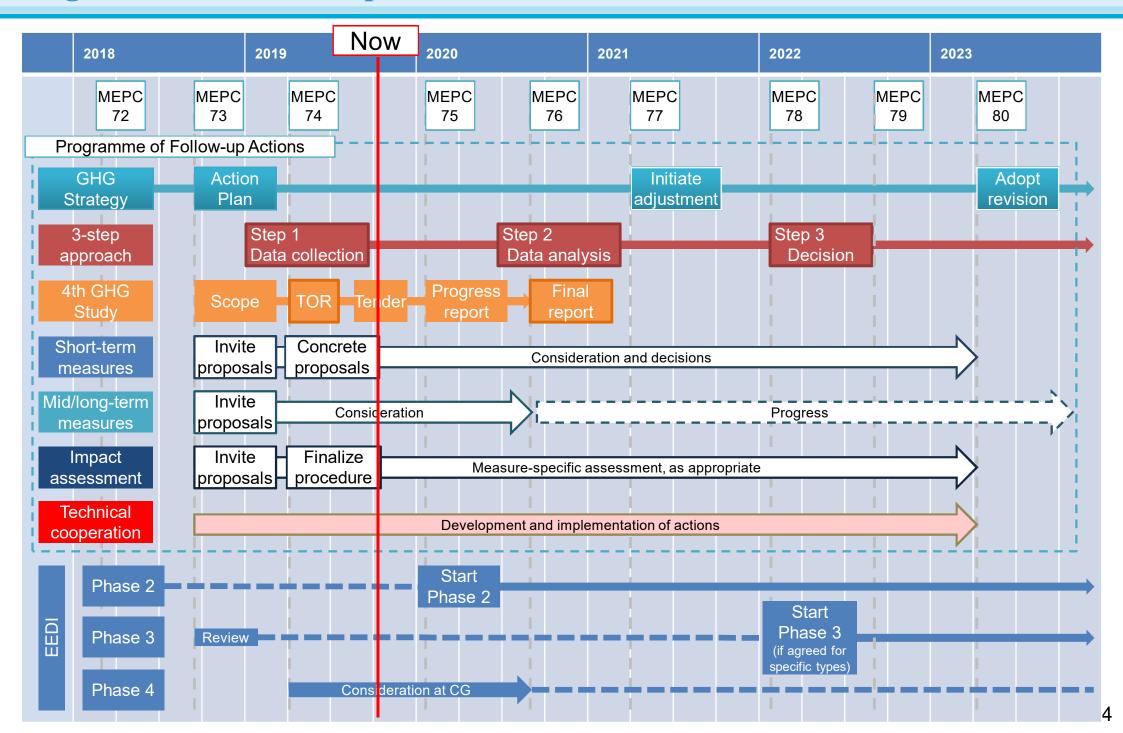
*1 EEDI: Energy Efficiency Design Index

*2 SEEMP: Ship Energy Efficiency Management Plan

etc.

Programme of Follow-up Actions





CO₂ requirement on new ships: EEDI regulation



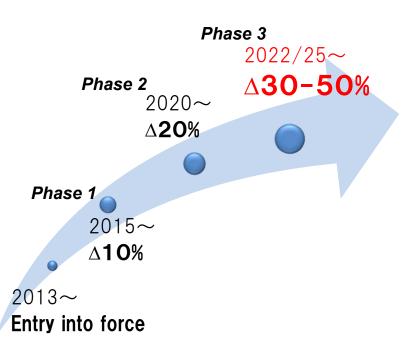
- Mandatory goal-based energy efficiency requirement applied globally on new ships after 2013
- Gradually strengthened in phased basis

EEDI = Fuel carbon factor × **Efficiency**

[GHG-kg/ton-mile]

[GHG-kg/fuel-ton]

[fuel-ton/ton-mile]



Introduction of Phase 4 (20XX, Δ X%)

Ongoing work at the Correspondence Group

- ✓ Bottom-up exercise: develop a list of new technologies and alternative fuels along with GHG reduction potential, year of practical use and challenges
- ✓ Backcasting from the 2050 target: consider how EEDI can contribute to the initial IMO GHG Strategy
- ✓ Other technical issues: scope of application, technical guidelines, evaluation of alternative fuels etc

Proposed short-term measures on existing ships



20+ candidate short-term measures were proposed at MEPC74

✓ Japan/Norway

Mandatory Cap on energy efficiency existing ship index, e.g., engine power limit

✓ Denmark/Germany/Spain

Mandatory Cap on annual average of energy efficiency

✓ France/Clean Shipping Coalition(CSC)

Mandatory Cap on annual average of speed

✓ International Chamber of Shipping(ICS)

Mandatory audit of the Ship Energy Efficiency Management Plan (SEEMP)

✓ World Shipping Council(WSC)

Mandatory R&D contributions per tonne of fuel



Poseidon Principles

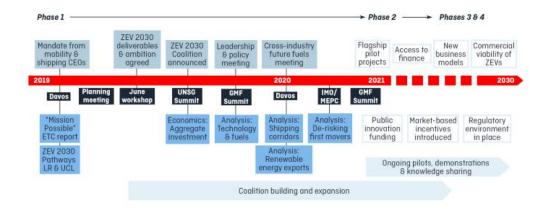








Getting to Zero Coalition













THANK YOU!

