A low-carbon future for international shipping

SMI Seminar 2018, Singapore, 24 April 2018

Mr. Camille Bourgeon IMO Secretariat







- 1. IMO work to address GHG emissions from international shipping
- 2. Introduction to the Initial IMO Strategy on Reduction of GHG emissions from ships
- **3.** Future work at IMO







- Over 80% of global trade by volume and more than 70% of its value carried on board ships
- World seaborne trade volumes expanded by 2.6% in 2016 to reach 10.3 billion tons of cargo
- Cargo flows are set to expand across all segments, with containerized and major dry bulk commodities trades recording the fastest growth







- In September 1997 Air Pollution Conference adopted resolution 8 on CO₂ emissions from ships
- Resolution A.963(23) on IMO Policies and Practices Related to the Reduction of Greenhouse Gas Emissions from Ships, adopted by Assembly 23 in December 2003
- Assembly urged the Marine Environment Protection Committee to identify and develop the mechanism or mechanisms needed to achieve the limitation or reduction of GHG emissions from international shipping









- In 2012, international shipping CO₂ emissions were estimated to be 796 million tonnes accounting for 2.2% of global CO₂ emissions
- By 2050, CO₂ emissions from international shipping could grow by between 50% and 250%, depending on future economic growth and energy developments
- Demand is the key driver for growth









Ref: Third IMO GHG Study 2014



8

EEDI and related work

Technical tools (new ships)

• EEDI (Energy Efficiency Design Index)

Operational tools (existing ships)

- EEOI (Energy Efficiency Operational Indicator)
- SEEMP (Ship Energy Efficiency Management Plan)

$$EEDI = \frac{CO_2 \ emission}{transport \ work}$$









Fuel oil consumption data collection system

Information to be submitted to the IMO Ship Fuel Oil Consumption Database

- IMO number
- Period of calendar year covered
- Technical characteristics of the ship
- Ship type
- Gross tonnage (GT)
- Net tonnage (NT)
- Deadweight (DWT)
- Power output (rated power) of main and auxiliary engines (kW)
- EEDI (if applicable)

Ice class

- Fuel oil consumption, by fuel oil type, in metric tonnes and methods used for collecting fuel oil consumption data
- Distance travelled (over ground), hours underway





- UNDP-GEF-IMO Global Maritime Energy Efficiency Partnerships project, to assist developing countries in the implementation of the energy efficiency measures adopted by IMO
- the ten Lead Pilot Countries have agreed that the project should be extended to 2018 and that IMO pursue a follow-up phase
- The project aims to contribute to a significant reduction of GHG emissions from international shipping via supporting ten Lead Pilot Countries in taking a fast-track approach to pursuing relevant legal, policy and institutional reforms, driving national government action and industry innovation to support the effective implementation of IMO's energy efficiency requirements
- In June 2017, the "Global Industry Alliance to Support Low Carbon Shipping" (GIA) was launched, connecting the GloMEEP Project and the maritime industry. Under the GIA, 16 leading maritime companies have committed both technical expertise and financial capital, to collectively identify and develop innovative solutions to address common barriers to the uptake and implementation of energy efficiency technologies and operational measures





Global MTCC Network (GMN)

- Progress on an ambitious €10 million European Union-funded four-year project to establish a global network of regional Maritime Technology Cooperation Centres with a focus on limiting and reducing GHG emissions from shipping in five regions - Africa, Asia, the Caribbean, Latin America and the Pacific
- Five Maritime Technology Cooperation Centres (MTCCs) established
- Through 2019 this Network will promote the uptake of low-carbon technologies and operations in maritime transport. It will help developing countries and, in particular, Least Developed Countries and Small Islands Developing States limit GHG emissions from their shipping sectors through technical assistance and capacity building, while encouraging the uptake of innovative energy-efficiency technologies.



INTERNATIONAL MARITIME ORGANIZATION





Continuous GHG discussions at IMO











RESOLUTION MEPC.304(72)

Adopted on 13 April 2018

INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS

THE MARINE ENVIRONMENT PROTECTION COMMITTEE

RECALLING Article 38(e) of the Convention on the International Maritime Organization (the Organization) concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

ACKNOWLEDGING that work to address greenhouse gas (GHG) emissions from ships his C been undertaken by the Organization continuously since 1997, in particular, through of pint global mandatory technical and operational energy efficiency measurem for the under



2 VISION

IMO remains committed to reducing GHG emissions from international shipping and, as a matter of urgency, aims to phase them out as soon as possible in this century.



Levels of ambition

3.1 Subject to amendment depending on reviews to be conducted by the Organization, the Initial Strategy identifies levels of ambition for the international shipping sector noting that technological innovation and the global introduction of alternative fuels and/or energy sources for international shipping will be integral to achieve the overall ambition. The reviews should take into account updated emission estimates, emissions reduction options for international shipping, and the reports of the Intergovernmental Panel on Climate Change (IPCC), as relevant. Levels of ambition directing the Initial Strategy are as follows:



.1 carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships

to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate;

.2 carbon intensity of international shipping to decline

to reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and

.3 GHG emissions from international shipping to peak and decline

to peak GHG emissions from international shipping as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals.





Figure 1: CO₂ emissions from international shipping under IMO's initial GHG strategy (blue and green) vs. BAU (black), with cumulative emissions 2015 through 2075.

Source: ICCT, 2018













Future work at IMO









International Maritime Organization

4 Albert Embankment
London
SE1 7SR
United Kingdom

Tel: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210 Email: <u>info@imo.org</u> <u>www.imo.org</u>



twitter.com/imohq

facebook.com/imohq

youtube.com/imohq

flickr.com/photos/ imo-un/collections

