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Agenda item 3 (b)
Implementation of all the elements of decision 1/CP.17
Matters related to paragraphs 7 and 8

IMO's work to address GHG emissions from international shipping

17 August 2012

SUMMARY

IMO's Marine Environment Protection Committee (MEPC) has been considering as an important part of its agenda actions to address greenhouse gas (GHG) emission from ships engaged in international trade. MEPC 63 in February/March 2012 had the participation of more than 800 delegates from 99 Member States, five United Nations bodies, six intergovernmental organizations and 46 non-governmental organizations with consultative status with IMO.

Important Guidelines aimed at supporting uniform implementation of the mandatory measures to increase energy efficiency and reduce GHG emissions from international shipping were adopted by MEPC 63, paving the way for the regulations on EEDI and SEEMP to be smoothly and uniformly implemented by Administrations and industry upon its entry into force on 1 January 2013.

The MEPC 63 also continued its discussion on Market-Based Measures for GHG emissions from international shipping.

IMO is now focusing its efforts on technical co-operation and capacity building to ensure smooth and effective implementation and enforcement of the new regulations worldwide and will be holding a series of workshops in all regions of the world on implementation of the measures to address GHG emissions.

Introduction

1 International shipping plays a vital role in the facilitation of world trade as the most cost-effective and energy-efficient mode of mass transport, making a significant contribution to global prosperity in both developing and developed countries.

2 IMO was established by governments as a specialized agency under the United Nations to provide machinery for intergovernmental cooperation in the field of regulation of ships engaged in international trade. IMO is responsible for the global regulation of all facets pertaining to international shipping and has a key role in ensuring that lives at sea are not put

at risk and that the environment is not polluted by ships' operations – as summed up in IMO's mission statement: **Safe, Secure and Efficient Shipping on Clean Oceans**.

3 The global character of shipping has resulted in the adoption of global regulation that applies universally to all ships irrespective of the country of ship registration, in line with the basic principle of non-discrimination set out in IMO's constitutive Convention.

Work on control of GHG emissions from international shipping

4 Measures to improve energy efficiency of international shipping were adopted by Parties to Annex VI of the Convention on the Prevention of Pollution from Ships (MARPOL) at MEPC 62 in July 2011. The *Regulations for energy efficiency of ships*, apply to internationally trading ships of 400 gross tonnage and above, and make mandatory the Energy Efficiency Design Index (EEDI) for new ships, and the Ship Energy Efficiency Management Plan *(*SEEMP) for all ships. The measures will enter into force on 1 January 2013.

5 MEPC 63 (March 2012) adopted four important guidelines intended to assist in the implementation of the mandatory regulations on Energy Efficiency for Ships in MARPOL Annex VI:

- *resolution MEPC.212(93) – 2012 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships*;
- *resolution MEPC.213(93) – 2012 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP)*;
- *resolution MEPC.214(93) – 2012 Guidelines on survey and certification of the Energy Efficiency Design Index (EEDI)*; and
- *resolution MEPC.215(93) – Guidelines for calculation of reference lines for use with the Energy Efficiency Design Index (EEDI).*

6 The EEDI is a non-prescriptive, performance-based mechanism that leaves the choice of technologies to use in a specific ship design to the industry. So long as the required energy-efficiency level is attained, ship designers and builders are free to use the most cost-efficient solutions for the ship to comply with the regulations.

7 All ships of 400 gross tonnes and above engaged in international trade will be required to implement and maintain a SEEMP which establishes a mechanism for operators to improve the energy efficiency of ships. This should be achieved by monitoring the energy efficiency performance of a ship's transportation work and at regular intervals considering new technologies and practices to improve energy efficiency.

8 MEPC 63 (March 2012) also agreed on an updated work plan for further development of guidelines and EEDI frameworks for those ships not covered by the current EEDI regulations.

Resolution on Technical co-operation and transfer of technology

9 Linked to the implementation of energy efficiency measures was the development of a draft MEPC resolution on the *Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships*, which will be further considered at MEPC 64 (1 to 5 October 2012).

Work on Market-Based Measures (MBMs)

10 MEPC 63 (March 2012) continued its consideration of proposed MBMs, which would complement the technical and operational measures already adopted. Further consideration is expected at MEPC 64 (1 to 5 October 2012). The MBM proposals under review range from a contribution or levy on all CO_2 emissions from international shipping or only from those ships not meeting the EEDI requirement, via emission trading systems, to schemes based on a ship's actual efficiency, both by design (EEDI) and operation (SEEMP).

11 MEPC 63 (March 2012) considered the undertaking of an impact assessment of the MBM proposals with focus on possible impacts on consumers and industries in developing countries, in general, and in particular, least developed countries, small islands developing States and remotely located developing countries with long trading distances, and considered in detail the methodology and criteria it should be based on. A consolidated draft Terms of Reference for the impact assessment are due to be considered further by MEPC 64 in October 2012.

Technical assistance related to improvement of energy efficiency in shipping

12 The Vice-Chairman of MEPC undertook in 2009, in accordance with relevant IMO provisions, a preliminary assessment of the capacity building needs related to the then proposed new chapter 4 of MARPOL Annex VI, which made the following observations and recommendations:

.1 it will be necessary to update national legislation and developing countries may need technical assistance to do this;

.2 there will be a need to train seafarers in use of new technologies;

.3 there will be a need to train flag and port State control officers to ensure effective and uniform implementation and enforcement; and

.4 that it is necessary to instil in the industry an energy efficiency culture both onboard ships and in the land-based organizations.

13 It was suggested in the preliminary assessment that IMO's Integrated Technical Cooperation Programme (ITCP) should allocate funding for the recommended training and that such activities should be implemented before the entry into force of the amendments. IMO has developed training courses and material in response to the identified needs as set out below:

.1 **Awareness raising of energy efficiency and CO_2 emissions from international shipping:** Regional and national workshops to raise awareness of GHG emissions from ships and their link to climate change, and in particular on the mandatory technical and operational measures in Chapter 4 of MARPOL Annex VI.

.2 **Energy Efficient Ship Design:** Regional and national workshops to enable participants to identify the elements influencing the energy efficiency of a given ship design and to use relevant tools for calculation of a ship's EEDI value.

.3 **Energy Efficient Ship Operations:** Regional and national workshops Aimed at training personnel on full and effective implementation and optimization of operational energy efficiency measures on board ships.

.4 **Enforcement by port States related to energy efficiency and GHG emissions under MARPOL Annex VI:** Regional workshops for port State control officers to raise awareness of the MARPOL Annex VI requirements on energy efficiency and to enhance their global and uniform implementation and enforcement.

14 A comprehensive portfolio of training material has been produced under each of the abovementioned activities and a train-the-trainer course is being developed. In addition to funding through IMO's technical cooperation programme (ITCP), IMO in April 2011, signed an agreement with the Korean International Cooperation Agency (KOICA) for implementation of a project on "Building Capacities in East Asian countries to address GHG emissions from Ships". A total of 12 workshops or training courses are planned and IMO is seeking additional funding from various sources to scale up the activities.

Summary

15 Although international maritime transport is the most energy efficient mode of mass transport and only a modest contributor to worldwide CO_2 emissions (2.7% in 2007), a global approach for further improvements in energy efficiency and emission reduction is considered necessary as sea transport is predicted to continue growing significantly in pace with world trade.

16 IMO has developed and adopted a framework of technical and operational measures that will serve as mandatory performance standards for increased energy efficiency in international shipping. The framework builds on IMO’s enforcement and control provisions (flag and port State controls) and includes also aspects such as monitoring, verification and reporting as well as modalities for effective implementation.

17 In view of projections for growth in world trade and the overall GHG emission reductions needed to meet the two degrees target, IMO and its Member Governments, are considering a possible market-based mechanism that could enable international shipping contribute to this goal.

18 IMO, as the global regulator of international shipping, will continue its endeavours to reduce any environmental impacts from international maritime transport, a transport industry that is vital to world trade and sustainable development, and keep relevant bodies of the UNFCCC informed of its achievements.

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