

**Note by the International Maritime Organization to the thirty-fifth session of the
Subsidiary Body for Scientific and Technical Advice (SBSTA 35)**

**Agenda item 9(a) - Emissions from fuel used for international aviation and
maritime transport**

Breakthrough at IMO

The first ever legally binding and global CO₂ standard agreed for an industry sector

September 2011

SUMMARY

Mandatory measures to reduce GHG emissions from international shipping were adopted by Parties to MARPOL Annex VI represented in the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO), when it met for its 62nd session from 11 to 15 July 2011 in London, representing the first ever mandatory global greenhouse gas reduction regime for an international industry sector.

The amendments to MARPOL Annex VI - *Regulations for the prevention of air pollution from ships*, add a new chapter 4 to Annex VI on *Regulations on energy efficiency for ships* to make mandatory the Energy Efficiency Design Index (EEDI) for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all ships. Other amendments to Annex VI add new definitions and the requirements for survey and certification, including the format for the International Energy Efficiency Certificate. The regulations apply to all ships of 400 gross tonnage and above and are expected to enter into force internationally through the tacit acceptance procedure on 1 January 2013.

Introduction

1 Work on the prevention of air pollution and control of greenhouse gas (GHG) emissions from ships started within the International Maritime Organization (IMO) in the late 1980s. The first regulatory steps were the phasing out of ozone depleting substances both as refrigerant gases and in fire-fighting systems. Later, prevention of air pollution in the form of oil cargo vapours and exhaust gases were targeted by, *inter alia*, adopting limits for nitrogen oxides and sulphur oxides in ships' exhaust gases. In recent years, the focus has been on control of GHG emissions from ships engaged in international trade.

2 Due to its close connection to global commerce, international shipping plays a vital role in the facilitation of world trade as the most cost-effective and energy-efficient mode of bulk transport, making a significant contribution to global prosperity in both developing and developed countries. Shipping is probably also the most international of all the world's industries and the global character of the industry requires global regulations that apply universally to all ships. IMO, as the United Nation's specialized agency responsible for the regulation of all facets pertaining to international shipping, 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 As shipping is a global industry and ships are competing in a single global market, it must be regulated at the global level for any control regime to be environmentally effective (avoid carbon leakage) and to maintain a level playing field for all ships irrespective of flag (nationality) or ownership. IMO's vision is to eliminate all adverse environmental impact from ships by developing robust and effective regulations that apply universally to all ships.

Work on control of GHG emissions from international shipping

4 IMO's Assembly resolution A.963(23) on IMO Policies and Practices Related to the Reduction of Greenhouse Gas Emissions from Ships urges the Organization's Marine Environment Protection Committee (MEPC) to identify and develop the mechanisms needed to achieve limitation or reduction of GHG emissions from international shipping.

5 In this regard, although international maritime transport is the most energy efficient mode of bulk transport and only a modest contributor to global CO₂ emissions (2.7% in 2007) while carrying 90% of world trade, a global approach for further improvements in energy efficiency and emission reductions was seen as being necessary given that sea transport is predicted to continue growing significantly in line with world trade.

Outcome of MEPC 62 – adoption of mandatory CO₂ regulations

6 As reported to SBSTA 33 (FCCC/SBSTA/2010/MISC.14), MEPC 62 in July 2011 continued its consideration of making the already developed draft technical and operational measures mandatory by adding a new chapter on energy efficiency to MARPOL Annex VI – Regulations on the prevention of air pollution from ships. MEPC 62 was held at IMO's Headquarters in London with record attendance and a record number of submitted documents. Very good momentum had been generated in the lead up to the session, during which parties involved in informal talks had showed great willingness to work out a compromise regulatory text that could be accepted by all and be adopted by consensus.

7 A large number of delegations supported a compromise proposal by Singapore (MEPC 62/6/21) and expressed interest in further consideration of how it could be incorporated in the draft regulatory text. Noting that an informal group convened by the MEPC Chairman was holding consultations with a view to seeking consensus among Member States on the proposed energy efficiency regulations, the Committee agreed that

the proposal by Singapore provided scope for a compromise agreement as it contained elements around which a consensus could be built.

8 Having held extensive informal negotiations, the Chairman was able to present to plenary, a compromise text on a new chapter on energy efficiency to be added to MARPOL Annex VI. The fruitful negotiations leading to a compromise text clearly indicated the Parties' willingness to find workable solutions and to respond to the urgent need for all industries, including international shipping, to contribute to the concerted worldwide effort to stem climate change.

9 Recognizing that capacity building and technical assistance to administrations without the required human and financial resources are essential elements for any new regulations to be effectively implemented and enforced in the world fleet of merchant vessels, the new chapter includes a regulation on *Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships*. This requires Administrations, in co-operation with IMO and other international bodies, to promote and provide, as appropriate, support directly or through IMO to States, especially developing States, that request technical assistance. It also requires the Administration of a Party to co-operate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States, which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfil the new energy efficiency requirements.

10 All delegations that intervened in the ensuing plenary debate expressed their admiration for the Chairman's strenuous efforts to bring all Members together and produce a text on the basis of which consensus might be reached. In this respect, while some delegations considered that additional amendments and clarifications were required before adoption of the proposed text could be further considered, other delegations were of the view that the text presented by the Chairman was the most delicate of compromises and should be considered as the final text for adoption.

11 The Secretary-General congratulated the Chairman and delegations for their hard work and statesmanlike attitude in drafting the compromise text. Recalling his opening remarks to MEPC 62 appealing to all Members to compromise, and noting that every word, phrase, sentence and paragraph of the proposed text had been carefully crafted on the basis of concessions made by all engaged in the consultations, he commended the text to the Committee as it represented a well-balanced outcome that was workable in today's shipping reality and which also preserved the universality of IMO's regulations and the unity of its membership.

12 In turn, the Chairman thanked the Committee for its trust in his leadership on the issue and highlighted that the text on capacity-building had been based on corresponding regulatory text existing in other IMO conventions, which had, nevertheless, been improved and strengthened, while the text on application had been based on the proposal of Singapore but without the wording on denial of port entry. He, therefore, also commended the text and invited the Committee to adopt it.

13 The majority of delegations that responded to the Chairman's invitation supported adoption. However, one delegation requested that a vote be held on adoption of the aforementioned draft amendments while another delegation requested that the vote be undertaken by a roll-call. As 59 of the 64 Parties to MARPOL Annex VI were present and eligible to vote, the outcome of the roll call vote was as follows:

Yes: 49 Parties

No: 5 Parties

Abstain: 2 Parties

Not present in the room: 3 Parties

14 As a result of the roll call vote, mandatory measures to reduce GHG emissions from international shipping were adopted by Parties to MARPOL Annex VI, representing the first ever legally binding global greenhouse gas reduction regime for an international industry sector. It is understood that these amendments also constitute the first international climate change treaty provisions to be formally adopted since the Kyoto Protocol in 1997.

15 From the outcome of the vote it may be worth noting that the yes-voting countries represent some 79% of the world's merchant shipping tonnage, be that tonnage flagged in developing or developed countries. Moreover, in illustration of the universality of the regulatory measures now introduced into MARPOL Annex VI, the yes-voting countries represent all regions of the world – both exporters and importers, as well as the largest flag States, most of the large ship building nations and many of the countries that are most likely to suffer first from the effects of climate change. Perhaps most importantly, the yes-voting countries represent about 75% of CO₂ emissions from international shipping which, therefore, augurs well for the environmental effectiveness of the new IMO treaty obligations.

16 The amendments to MARPOL Annex VI (*Regulations for the prevention of air pollution from ships*), add a new chapter 4 *on Regulations on energy efficiency for ships* to make mandatory the Energy Efficiency Design Index (EEDI) for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all ships. Other amendments add new definitions and requirements for survey and certification, including the format for the new International Energy Efficiency Certificate. The new regulations apply to all merchant ships of 400 gross tonnage and above, regardless of the national flag they fly or the nationality of the owner, and are expected to enter into force globally on 1 January 2013. However, an Administration that considers that its industry needs more time to comply may waive the requirement for new ships to comply with the EEDI for up to four years.

17 Commenting on the outcome of MEPC 62, IMO Secretary-General Efthimios E. Mitropoulos expressed satisfaction at the many and various significant achievements with which the session should be credited. "Although not by consensus – which of course would be the ideal outcome – the Committee has now adopted amendments to MARPOL Annex VI introducing mandatory technical and operational measures for the energy efficiency of ships. Let us hope that the work to follow on these issues will enable all Members to join in, so that the service to the environment the measures aimed at, will be complete" he said.

18 In this context, MEPC 62 also agreed a work plan to continue the work on energy efficiency measures for ships, to include the development of the EEDI framework for ship types and sizes, and propulsion systems, not covered by the current EEDI requirements and the development of EEDI and SEEMP-related guidelines. To this end, an intersessional working group meeting on energy efficiency measures for ships is scheduled to take place in January 2012.

Market-based measures

19 Adoption of mandatory technical and operational measures is a very important step in ensuring that the global shipping industry has the necessary mechanisms to reduce its GHG emissions. However, the MEPC has, at several sessions, recognized that these measures would not be sufficient to satisfactorily reduce the amount of GHG emissions from international shipping in view of the growth projections of world trade. Therefore, market-based mechanisms (MBMs) are also being considered by the Committee in line with IMO Assembly resolution A963(23) and its GHG work plan.

20 A market-based mechanism would serve two main purposes:

- .1 providing an economic incentive for the maritime industry to invest in more fuel-efficient ships and technologies, and to operate ships in a more energy-efficient manner (in sector reductions); and
- .2 off-setting in other sectors of growing ship emissions (out of sector reduction).

21 The MBM proposals under review range from contribution schemes for all CO₂ emissions from international shipping (to be collected by fuel oil suppliers and transferred to a global fund), or only emissions from ships not meeting the EEDI requirement, via emission trading systems, to schemes based on a ship's actual efficiency both by design and operation. Among the measures, there are also proposals for rebate mechanisms and other ways to accommodate the difference in the socio-economic capabilities of developing and developed States, as well as other suggestions on how the special needs and circumstances of developing countries can be accommodated.

22 Some of the proposed schemes would reward efficient ships and ship operators by recycling parts of the financial contribution to the most efficient ones based on benchmarking. Other schemes would drive investments in more energy efficient technologies and improvements in operations by setting compulsory efficiency standards for all vessels (new and existing) and the trading of efficiency credits. Several of the proposed mechanisms - the contributions schemes (levy) inherently and the trading schemes through auctioning - would generate funds, the greater part of which the MEPC has considered should be used for climate change purposes in developing countries.

Conclusions

23 Being fully aware of the ultimate objective of the UNFCCC, which is to achieve stabilization of greenhouse gas concentrations at a level that prevents dangerous interference in the global climate system, IMO has sought a solution whereby a GHG control regime for international shipping, once enacted, will deliver real emission reductions and, at the same time, will contribute financially towards the wider efforts in combating climate change in developing countries.

24 The adoption by IMO of mandatory reduction measures for all new ships built from 2013 onwards will lead to significant emission reductions. By 2020, up to 50 million tonnes of CO₂ reductions are envisaged from the introduction of the EEDI for new ships, a figure that, by 2030, will increase to 240 million tonnes of CO₂ annually. In addition, a 20% improvement in energy efficiency by 2020, on a tonne mile basis, is envisaged from introduction of the operational measures (the SEEMP).

25 Further work is needed on market-based measures but the foundations have already been developed and will facilitate the finalization of a robust, comprehensive and efficient GHG regime, complementing IMO's regime of 51 international treaties regulating all non-commercial aspects of shipping.

26 IMO will thus continue its endeavours to reduce any environmental impacts from international shipping, a transport industry that is vital to world trade, economic growth and sustainable development – an industry and its global regulator which have, with the adoption of the MARPOL Annex VI energy efficiency regulations, demonstrated their commitment to contribute substantively and substantially to worldwide efforts to stem climate change, and their determination to pursue further GHG-reduction measures.

27 It is for the strong reasons outlined above, that IMO participates in COP 17/CMP 7 and SBSTA 35 expecting that, as the Kyoto Conference did fourteen years ago, the global community will continue to place its confidence on the Organization for an effective contribution, from the shipping point of view, to the objectives this Conference pursues. IMO will spare no effort to do its duty in pursuing the mandate of its Assembly and Marine Environment Protection Committee and within any target or timeframe the present Conference may decide.
