

IMO's Work on the Reduction of Greenhouse Gas Emissions from Ships

The First Intersessional Meeting of IMO's Working Group on Greenhouse Gas Emissions from Ships will be held in Oslo (23 - 27 June, 2008).

The week-long session is tasked with developing the technical basis for the reduction mechanisms that may form part of a future IMO regime to control greenhouse gas (GHG) emissions from international shipping, and a draft of the actual reduction mechanisms themselves, for further consideration by IMO's Marine Environment Protection Committee (MEPC).

The Oslo Meeting will further address market-based, operational and technical measures. These will include the development of a mandatory CO₂ Design Index for new ships and the completion of a CO₂ Operational Index, as well as further development of mechanisms with GHG-reduction potential for international shipping, *inter alia*: a global levy/hybrid mechanism; emissions trading schemes and/or so-called clean development mechanisms. The meeting will also undertake a review of best practices for voluntary implementation.

When the MEPC meets in London later this year (6 - 10 October) it is expected to approve the reduction mechanisms developed by the Oslo Intersessional Meeting. These mechanisms will form part of a coherent and binding IMO instrument applying to all ships. MEPC 58 is also expected to consider the regulatory and legal aspects and decide whether the GHG regulations should form part of an existing instrument or an entirely new instrument should be developed and adopted.

This article looks at some of the extensive and detailed work already carried out by IMO on this crucial topic.

Background

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

specialized shipping agency, plays a key role in ensuring that lives at sea are not put at risk and that the environment is not polluted by international shipping - as summed up in IMO's mission statement: Safe, Secure and Efficient Shipping on Clean Oceans.

Although to date no mandatory GHG instrument for international shipping has been adopted, IMO has given extensive consideration to the matter and is currently working in accordance with an ambitious work plan, due to culminate with the adoption of a binding instrument for all ships in 2009.

IMO's GHG related work

The IMO Assembly adopted, in December 2003, Resolution A.963(23) on "IMO Policies and Practices related to the Reduction of Greenhouse Gas Emissions from Ships", urging the MEPC to identify and develop the mechanisms needed to achieve limitation or reduction of GHG emissions from international shipping and to consider the methodological aspects related to reporting. The Assembly resolution requests the IMO Secretariat to continue co-operating with the Secretariats of UNFCCC and the International Civil Aviation Organization.

IMO Study on Greenhouse Gas Emissions from Ships

This Study, the most comprehensive assessment to date of the contribution made by international shipping to climate change, was published in 2000. The Study estimated that ships in 1996 contributed about 1.8 per cent of the world's total CO₂ emissions and clearly stated that there is no other mode of transport with a better CO₂ record.

The 2000 IMO GHG Study is being updated by an international consortium of renowned research institutes to facilitate future decisions. According to Sir Nicholas Stern's study of 2006, shipping represented one tenth of the transport sector as a whole. Other studies and IMO's preliminary findings suggest that the shipping sector's share of the global CO₂ emissions in 2007, due to the significant increase in world trade, is higher than previously thought. However, this will not be confirmed before the results of the updated Study are presented to IMO in the latter part of 2008.

Latest GHG considerations within IMO

MEPC 57 was held in London, from 31 March to 4 April 2008, with a fully laden agenda where prevention of air pollution and control of greenhouse gases from ships were the paramount issues.

MEPC 57 considered follow-up actions to resolution A.963(23) on “IMO policies and practices related to reduction of greenhouse gas emissions from ships”, including progress made in line with the “Work plan to identify and develop the mechanisms needed to achieve the limitation or reduction of CO₂ emissions from international shipping” adopted by MEPC 55 in October 2006.

The need for IMO and the maritime community as a whole to act in concert with, and contribute to, the wider international efforts aimed at swift and substantive action to combat climate change under the UNFCCC process, by proactively addressing the principles and objectives enshrined in the roadmap agreed at the Bali Conference out of genuine concern for the atmospheric environment, was highlighted.

Report of the Intersessional Correspondence Group

MEPC 57 considered the report of the intersessional Correspondence Group on GHG Related Issues, which was instructed to discuss possible approaches on technical, operational and market-based measures to address GHG emissions from ships. The report contained observations that all measures should be properly designed and be efficient, effective, and target-based. With regard to suggested voluntary measures, it was pointed out that, as stand-alone measures, they might not result in immediate and tangible outcomes. The report made a distinction between short- and longer-term reduction options, by giving a summary of each, and describing their advantages and disadvantages.

Fundamental principles for future regulations of GHG emissions from ships

MEPC 57 acknowledged the importance of developing fundamental principles as a basis for future regulations of GHG emissions from ships. MEPC 57 decided, by overwhelming majority, to take the principles listed below as its reference for further debate on GHG emissions from international shipping and also for further reflection when the nature and form of the measures to be taken were clearer. A coherent and comprehensive future IMO framework should therefore be:

1. effective in contributing to the reduction of total global greenhouse gas emissions;
2. binding and equally applicable to all flag States in order to avoid evasion;
3. cost-effective;
4. able to limit, or at least, effectively minimize competitive distortion;
5. based on sustainable environmental development without penalizing global trade and growth;
6. based on a goal-based approach and not prescribe specific methods;
7. supportive of promoting and facilitating technical innovation and R&D in the entire shipping sector;

8. accommodating to leading technologies in the field of energy efficiency; and
9. practical, transparent, fraud free and easy to administer.

A number of delegations expressed reservations on the principle stated in point 2 above. The Chairman proposed to carefully reflect on the contested principles in the intersessional period and the intention of the reflection would be to reach consensus on the issue of the principles at the next session of the Committee. MEPC 57 accepted the proposal of the Chairman and encouraged Member States to submit their views to that session.

Outcome of the UNFCCC Conference in Bali, December 2007

MEPC 57 agreed that it was very important that all parties involved in the UNFCCC process are fully briefed of the work being done by IMO to tackle GHG emissions from international shipping. The Secretariat, therefore, was requested to prepare and present progress reports on the Committee's achievements to the relevant UNFCCC subsidiary bodies at their sessions during 2008, as well as attending the meetings.

The Secretary-General's proposal to expedite IMO's work on GHG emissions

MEPC 57 considered a proposal by the Secretary-General to expedite IMO's work on GHG emissions. In introducing his proposal, the Secretary-General underlined the importance and urgency attached universally to the limitation and control of greenhouse gas emissions from all sources - including international shipping, as well as the need for IMO to act in concert with the wider international efforts - seeking the development and adoption of a global agreement by December 2009 and the coming into force of the new regime by 2012.

MEPC 57 welcomed the proposal to expedite IMO's work on GHG emissions from ships and agreed it would give more time for thorough discussion of all proposals prior to MEPC 58.

Intersessional GHG meeting

MEPC 57 approved Terms of Reference for an intersessional meeting of the Working Group on GHG Emissions from Ships, to be held in Oslo, Norway (23 - 27 June 2008). Recognizing the need to address GHG emissions from the maritime sector, in co-operation with the UNFCCC, and taking into account the conclusions of MEPC 57 on the reduction of greenhouse gas emissions from ships, the first intersessional meeting of the Working Group on GHG Emissions from Ships is instructed further to address market-based, operational and technical measures identified by the MEPC 57 and, in a non-prioritized order:

- 1 Develop a mandatory CO₂ Design Index for new ships and submit it to MEPC 58 for approval;
- 2 Review the existing CO₂ operational index guidelines (MEPC/Circ.471) with a view to finalization at MEPC 58 and, in particular:
 - .1 develop a methodology for a CO₂ baseline in terms of efficiency; and
 - .2 consider the purpose of the CO₂ operational indexing scheme;
- 3 Further develop mechanisms with GHG reduction potential for international shipping with a view to selecting the most promising measures for consideration at MEPC 58, *inter alia*:
 - .1 global levy/hybrid mechanism;
 - .2 Emissions Trading Schemes (ETS) and/or Clean Development Mechanism (CDM); and
 - .3 best practices on the range of measures as identified by MEPC 57 and how they can be implemented by ship builders, operators, charterers, ports and other relevant partners to make all possible efforts to reduce GHG emissions, with the aim of developing a resolution as appropriate;
- 4 Consider the level of reductions that can be achieved, address the design, implementation, cost benefit, capacity building and regulatory/legal aspects as well as the impacts for the shipping industry, the flag and port States and other stakeholders as appropriate, associated with each of these options.
- 5 Present a written report to MEPC 58.

Progress reports on the update of the 2000 IMO GHG Study

MEPC 57 noted that, in accordance with the Terms of Reference approved by MEPC 56, a Steering Committee had been established and had met twice under the Chairmanship of Ms. Petra Bethge (Germany). The contract for the update has been awarded to an international consortium of research institutions, co-ordinated by MARINTEK of Norway. The updating had been divided into two phases:

- 1 Phase 1, covering a CO₂ emission inventory from international shipping and future emission scenarios, will be reported to IMO by August 2008 for consideration by MEPC 58 in October 2008; and
- 2 Phase 2, also covering greenhouse gases other than CO₂ and other relevant substances in accordance with the methodology adopted by UNFCCC, as well as the identification and consideration of future reduction potentials by technical, operational and market-based measures, will be submitted to IMO by February 2009 for consideration by MEPC 59.

GHG module in GISIS

MEPC 57 noted with appreciation that the GHG module was now available in GISIS (the Global Integrated Shipping Information System) and encouraged Member States and others to use it, although no data were available for public users. The large collection of CO₂ indexing data received through submissions to the Committee will, following agreements with the submitting Governments, be entered into the database.

Re-establishment of the Correspondence Group on GHG Related Issues

MEPC 57 re-established the Intersessional Correspondence Group on GHG Related Issues coordinated by Australia and the Netherlands and instructed it as follows:

“Taking into consideration available relevant information, the Intersessional Correspondence Group on Greenhouse Gas Emissions from Ships is instructed to:

- 1 Prepare detailed proposals on the measures identified in the Correspondence Group report (MEPC 57/4/5; MEPC 57/4/5/Add.1), which have not been identified for further consideration by the GHG Working Group at its intersessional meeting in Oslo, Norway; and
- 2 Present an interim report to MEPC 58 with a final report to be presented to MEPC 59”.

MEPC 57 urged Member States and organizations to participate actively in the work of the Correspondence Group, to submit papers to the focal points for work prior to the intersessional meeting in Oslo and to that meeting itself, on the measures to be discussed in their respective terms of reference, including, but not limited to, design, implementation, cost-benefit, mitigation potential, capacity-building and regulatory/legal aspects.
