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Highlighting major developments on environment protection at the IMO in 2014: Priorities for Malaysia

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The Marine Environment Protection Committee (MEPC) of the International Maritime Organisation (IMO) met in London for the 66th and 67th sessions in March and October 2014. The IMO is essentially a United Nations specialised agency with responsibility for the safety and security of shipping as well as the prevention of marine pollution by ships with the MEPC focusing specifically on matters relating to the prevention and control of pollution from ships and, in particular, matters involving the adoption and amendment of conventions and other regulations and measures to ensure effective enforcement. This piece highlights major developments at the meetings narrowing down to those that would be of particular concern to the nation.

Introduction

Shipping is the most efficient and cost-effective mode of international transport for global trade and goods. International shipping transports about 90 percent of global trade all around the world, facilitating commerce and creating prosperity among nations and communities. Shipping can only operate effectively if the regulations and standards are adopted and implemented on an international basis; hence the importance of the International Maritime Organisation (IMO). The IMO sets the global standards on safety, security and environmental performance of international shipping; creating regulatory framework for the shipping industry which are universally adopted and implemented.

Sustainable shipping and maritime development is one of the main priorities of the IMO. For this, the IMO in cooperation with its member states, civil society and the shipping industry are working together towards a continued and strengthened contribution towards green economy and sustainable growth. To achieve this, some of the major developments in terms of IMO measures and activities cover ship design, construction, equipment, manning, operational and disposal. These and more mainly to ensure that shipping remains safe, secure, environmentally sound, and energy efficient through a green and sustainable global maritime transportation system.

Marine Environment Protection Committee (MEPC) 66th Session Meeting: Some Highlights

The 66th MEPC session discussed issues including MARPOL Annex VI on air emissions from ships, ballast water management, and the ship recycling convention, to name the major areas.

This MEPC meeting adopted amendments to the stricter Tier III standards on Nitrogen Oxides (NOX) for the emissions control areas (ECAs) for ships constructed on or after 1st January 2016. NOX control requirements generally apply to install marine diesel engines of over 130kW output power, with different levels (or Tiers) of control apply based on the ship construction date. Tier II controls are applied in outside control areas designated for NOX control and are required for marine diesel engines installed on ships constructed on or after 1st January 2011. These amendments basically provide for the application of NOX standards on marine engines installed on ships constructed from January 2016 operating in the North American Emission Control Area or the U.S. Caribbean Sea Emission Control Area that are designated for the control of NOX emissions. The adopted amendments are expected to enter into force in September 2015.

IMO in 2011 adopted mandatory measures to address energy efficiency of international shipping, which entered into force in January 2013 under MARPOL Annex VI. These Regulations on energy efficiency for ships make mandatory Energy Efficiency Design Index (EEDI) for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all ships. The EEDI basically requires a minimum energy efficiency level in terms of carbon dioxide (CO₂) emissions per capita mile for different ship types and sizes, with the levels being tightened over time. Reduction factors are set until 2025 where about 30 percent reduction is mandated over the average efficiency for ships that are built between 1999 and 2009. The SEEMP on the other hand, establishes a mechanism for the shipping companies to improve energy efficiency of ship operations to improve performance of the ship. On related areas, this meeting further considered amendments concerning the extension of the application of the EEDI to LNG carriers, ro-ro cargo ships, ro-ro passenger ships and cruise passenger ships with non-conventional propulsion, to enter into force in September 2015. Further, the MEPC continues its work on developing guidelines to support uniform implementation of energy-efficiency regulations for ships and adopted the 2014 Guidelines on the Method of Calculation of the Attained EEDI applicable to new ships.

Considering the need for technical cooperation and technology transfer to achieve some of these recent IMO requirements, financial contribution from Norway was welcomed intended for the organisation of workshops on the transfer of technology. Additionally, an Ad Hoc Working Group on Facilitation of Transfer of Technology for Ships was established alongside the adoption of a work plan which envisages on assessing the potential implications and impacts of the implementation of energy efficiency regulations. These efforts in particular address developing States' needs on technology transfer and financial needs, inventory on energy efficiency technologies for ships, barriers to technology transfer and making recommendations on financial resources and capacity building needs.

Another development at this meeting included the presentation of a proposal to establish a framework for the collection and reporting of data on fuel consumption of ships. A correspondence group was established to consider the development of such a system, including identifying the core elements that would be required. Reporting from this group was targeted at the 67th MEPC session.

In addition, another correspondence group was established to assess the availability of compliant fuel oil to meet the requirements set out on control of emissions of sulphur oxides (SOX) from ships. The sulphur content (expressed in terms of % m/m by weight) of fuel oil used on board ships is required to be a maximum of 3.50% m/m outside the ECA, falling to 0.50% m/m on and after January 2020. Depending on the outcome of this review (as to the availability of compliant fuel oil), it has been envisaged that the requirement could be deferred to January 2025.

In addition to amendments relating to MARPOL Annex VI and associated areas, this MEPC meeting also adopted specific requirements on ballast water management. *Basic Approval* and *Final Approval* were granted to four and two ballast water management systems that make use of Active Substances, respectively. This meeting further approved a revision of the GESAMP-BWWG (Ballast Water Working Group on Active Substances) Methodology for information gathering and conduct of work.

As for the implementation of the IMO Ship Recycling Convention, this meeting considered the report of a correspondence group tasked with developing threshold values and exemptions applicable to the materials to be listed in Inventories of Hazardous Materials that are required under this Convention. Overall, the meeting agreed that further work was needed.

Additionally, this MEPC meeting also approved the Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life, recognising that underwater noise radiating from commercial ships may have both short-and long-term negative consequences on marine life.

Marine Environment Protection Committee (MEPC) 67th Session Meeting: Some Highlights

The 67th session continued work on some of the major areas discussed at the previous meeting such as approving the third IMO Greenhouse (GHG) Study 2014 that provides updated estimates for GHG emissions from ships. The reported figures include 796 million tonnes of CO₂ from international shipping in 2012 against 885 million tonnes in 2007, representing 2.2 percent of the global emissions of CO₂ in 2012 against 2.8 percent in 2007. Predicted future scenarios however indicate that the emissions are likely to grow by about 50 – 250 percent by 2050, depending on global economic and energy developments.

Further, this session continued its work on further developing guidelines to support the uniform implementation of the regulations on energy-efficiency for ships. This MEPC adopted the 2014 Guidelines on survey and certification of the EEDI, updating the previous version to include for example, identification of the primary fuel for the calculation of the attained EEDI for ships fitted with dual-fuel engines using LNG and liquid fuel oil. The MEPC also adopted amendments to the 2013 Interim Guidelines for determining minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions, to make the guidelines applicable to phase 1 starting from January 2015 of the EEDI requirements. Further, a correspondence group was established to review the status of technological developments relevant to implementing the next phase of EEDI regulatory framework.

As for the data collection system for fuel consumption of ships, this meeting agreed in principle to develop a data collection system for ships for fuel consumption of ships with core elements to include the following areas: data collection by ships, flag State functions in relation to data collection and establishment of a centralised database by the IMO.

The correspondence group on sulphur review methodology developed a preliminary draft methodology framework and was instructed to continue its work and submit the final report to the next MEPC session meeting. Following discussion on fuel oil quality, a correspondence group was established to develop draft guidance on quality-assurance for fuel oil delivered for use on board ships and to consider the adequacy of the current legal framework in MARPOL Annex VI in relation to fuel oil quality. The group will report to the next MEPC meeting.

On addressing ballast water management, this MEPC session adopted resolutions aimed at facilitating the entry into force and implementation of the ballast water convention. The meeting noted that the number of Contracting Governments was currently 38, representing 30.38% of the world's merchant fleet tonnage (35% is needed to meet entry into force requirements), and urged those States which have not yet ratified the Convention to do so at the earliest possible opportunity.

Considerations for the Malaysian Shipping Sector

The actions by the international community through the MEPC are critical to addressing shipping impacts on the environment. Increasing concerns among the stakeholders on adverse environmental impacts such as pollution and waste brought by shipping activities, and the threats on the environment and resources act as the main drivers to the adoption of greener practices. In the face of intensifying global trade and shipping activities, the international community envisages that green practices would help to lessen environmental damage from shipping operations while enhancing performance and efficiency.

Without commensurate efforts by other members of the ocean business community however, the best efforts by the shipping industry may not achieve the desired protection of the marine environment. The leadership shown by the international community must be linked with leadership from all relevant stakeholders if the oceans are to be truly kept safe, secure, efficient and clean. Governments, along with the shipping and maritime industries and the world community, should collaborate to make the necessary investments and take actions to bolster the future of the maritime transportation system and ensure that shipping continues to be environmentally friendly.

Malaysia's strategic location along the Straits of Malacca (SOM) used for international navigation and global trade makes it all the more significant for green shipping practices to be developed and adopted. Over the years Malaysia has become more green-conscious as apparent from the ratification of a number of IMO green shipping conventions and subsequent measures adopted at the national level. Malaysia signed three conventions in September 2010 alone i.e., the Ballast Water Convention, Annex VI of MARPOL as well as the Antifouling Convention, and followed up with various actions at the national level which included managerial measures, capacity building, as well as research and monitoring.

The national shipping line, Malaysia International Shipping Corporation Berhad (MISC), is also committed to reduce their carbon footprints through the implementation of Green Technology initiatives (GT initiatives) on some of their vessels. MISC has also been working together with Universiti Teknologi Malaysia (UTM) to conduct studies on determining the energy efficiency of their ships, besides evaluating the performance of their fleet with regards to carbon dioxide emissions, and enabling monitoring of the effects of their emission reduction measures. Results from the study have shown that MISC ships in operation are generally efficient (this is based on the average carbon dioxide emissions per tonne of cargo carried per nautical mile) when compared against similar studies by IMO and other worldwide fleets. These initiatives reinstate MISC's commitment to the MEPC and in ensuring that their ships comply with the global environmental requirements of the industry. In addition, several of the MISC ships have also been credited with Green Awards (GA), a certification ascertained through comprehensive audits of a broad aspect of environmental focus, crew training and development, vessel maintenance and health safety and environmental (HSE) aspects. This award enables the shipping line to reap various financial and non-financial benefits including a reduction on port tariffs at ports in Belgium, Canada, Germany, Netherlands, New Zealand, Portugal and South Africa. To provide some examples, all GA certified vessels are granted 10 percent fee reduction on port dues when calling into the Port of Montreal, Canada; the Hamburg Port Authority in Germany provides a

reduction of 3 percent in port fees for crude oil, product and chemical tankers and LNG carriers of any size that hold the GA certificate; a 5 percent reduction in tonnage dues are provided to all GA certified vessels calling at the Gibraltar Port; and another instance include inland barges certified by the GA entitled to a 5 percent discount on the harbour dues at the Groningen Seaports in the Netherlands.

It is nevertheless important that Malaysia continues to work on improving practices especially in terms of energy efficiency, technology development and innovation, capacity building, and the development of maritime infrastructure. These must be underpinned by the principle of global standards and strengthened regional cooperation, especially concerning ships plying the national and regional waters where IMO stipulations have minimal impact without uniform ratification of related conventions among the concerned parties. Additionally, there are also possibilities to look at new areas and ways and means to achieve improved management of the environment, for instance via the establishment of protected areas in suitable areas in the SOM and consideration on the reduction of underwater noise from commercial, in terms of the broader areas that are increasingly gaining momentum and importance at the MEPC.