

B. REGULATORY DEVELOPMENTS RELATING TO THE REDUCTION OF GREENHOUSE GAS EMISSIONS FROM INTERNATIONAL SHIPPING, AND OTHER ENVIRONMENTAL ISSUES

1. Reduction of greenhouse gas emissions from international shipping and energy efficiency

Greenhouse gas emissions from international shipping

Maritime transport emits around 1 billion tons of carbon dioxide annually and is responsible for about 2.5 per cent of global greenhouse gas emissions from fuel combustion. By 2050, depending on future economic growth and energy developments, shipping emissions may increase by between 50 and 250 per cent (IMO, 2014a). This is not in keeping with the internationally agreed goal of limiting the global average temperature increase to below 2°C above pre-industrial levels, which would require worldwide emissions to be at least halved from the 1990 level by 2050. The implementation of technical and operational measures for ships could increase efficiency and reduce the emissions rate by up to 75 per cent, and further reductions could be achieved by implementing innovative technologies (IMO, 2009).

The Marine Environment Protection Committee, at its session in July 2017, continued to build on previous work to address greenhouse gas emissions from international shipping, in particular through the adoption of an IMO strategy on the reduction of greenhouse gas emissions from ships in 2018, in accordance with a road map approved at its session in October 2016 (IMO, 2016a, annex 11). The Committee considered various proposals with regard to the strategy from States and industry representatives, and noted the draft outline for its possible structure, which included the following elements: preamble, introduction and context, including emission scenarios; vision; levels of ambition and guiding principles; list of candidate short-term, midterm and long-term measures with possible timelines and their impacts on States; barriers and supportive measures, capacity-building and

technical cooperation and research and development; follow-up actions towards the development of the revised strategy; and a periodic review of the strategy (IMO, 2017c). Delegations expressed concern with regard to the need for proper references in the road map to consideration of the special needs of small island developing States and the least developed countries, in accordance with the Small Island Developing States Accelerated Modalities of Action Pathway, to ensure both progress and inclusiveness, and the need for a high level of ambition with regard to the strategy was highlighted.⁷

Energy efficiency for ships

Energy efficiency measures, legally binding for the entire maritime industry since 2013, include the Energy Efficiency Design Index that sets standards for new ships, and associated operational energy efficiency measures for existing ships. However, no agreement has been reached to date on global market-based measures or other instruments that would reduce emissions from the entire shipping sector.

The Marine Environment Protection Committee, at its session in July 2017, was advised that nearly 2,500 new ships had been certified as complying with energy efficiency standards. Among others, the Committee adopted guidelines for administration verification of ship fuel oil consumption data for ships of 5,000 gross tonnage and above, starting from 2019, and guidelines for the development and management of the IMO ship fuel oil consumption database (IMO, 2017c, annexes 16 and 17). These guidelines make it mandatory for ships of 5,000 gross tonnage and above to collect consumption data for each type of fuel oil they use, as well as additional specified data, including proxies for transport work. The aggregated data will be reported to the flag State after the end of each calendar year, and subsequently transferred to the IMO database.

2. Ship-source pollution and protection of the environment

Air pollution from ships

With regard to NO_x, the Marine Environment Protection Committee adopted amendments designating the North Sea and the Baltic Sea (which are emission control areas for sulphur oxide (SO_x)) as NO_x emission control areas under the International Convention for the Prevention of Pollution from Ships, annex VI, regulation 13. Marine diesel engines operating in these areas will be required to comply with the stricter tier III NO_x emissions limit when installed on ships constructed on or after 1 January 2021. Guidelines on selective catalytic reduction systems were also adopted (IMO, 2017c, annex 13).

With regard to SO_x, the Committee adopted an important decision with regard to human health and the

environment, namely to implement a global limit of 0.5 per cent on sulphur in fuel oil used on board ships, as set out in the International Convention for the Prevention of Pollution from Ships, annex VI, regulation 14.1.3, from 1 January 2020 (IMO, 2016a, annex 6). This represents a significant reduction from the 3.5 per cent limit currently in place outside emission control areas.⁸ To meet requirements, shipowners and operators continue to adopt various strategies, including installing scrubbers and switching to liquefied natural gas and other low-sulphur fuels. The Committee approved guidelines providing an agreed method for sampling to enable the effective control and enforcement of sulphur content of liquid fuel oil used on board ships under the provisions of the International Convention for the Prevention of Pollution from Ships, annex VI (IMO, 2016b), and amendments to the information to be included in the bunker delivery note related to the supply of fuel oil to ships that have fitted alternative mechanisms to address SO_x emission requirements (IMO, 2017c).

Ballast water management

An important development is the entry into force of the Ballast Water Management Convention, 2004, on 8 September 2017.⁹ The Convention aims to prevent the risk of the introduction and proliferation of non-native species following the discharge of untreated ballast water from ships. This is considered one of the four greatest threats to the world's oceans and one of the major threats to biodiversity, which, if not addressed, can have extremely severe public health-related and environmental and economic impacts (see <http://globallast.imo.org>). From the entry into force date, ships are required to manage their ballast water to meet standards referred to as D-1 and D-2; the former requires ships to exchange and release at least 95 per cent of ballast water by volume far away from a coast and the latter raises the restriction to a specified maximum amount of viable organisms allowed to be discharged, limiting the discharge of specified microbes harmful to human health. Draft amendments to the Convention as approved by the Marine Environment Protection Committee, to be circulated after its entry into force and adopted in April 2018, clarify when ships must comply with the D-2 standard. New ships, constructed on or after 8 September 2017, shall meet the D-2 standard from the date they are entered into service. Existing ships constructed before 8 September 2017 shall comply with the D-2 standard after their first or second five-year renewal survey associated with the International Oil Pollution Prevention Certificate under the International Convention for the Prevention of Pollution from Ships, annex I, conducted after 8 September 2017, and in any event not later than 8 September 2024 (IMO, 2017c).

Hazardous and noxious substances

In April 2017, the Legal Committee of IMO approved a draft resolution calling on States to consider ratifying the

International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996, as amended by its 2010 Protocol, and to implement it in a timely manner (IMO, 2017d, annex 2). This key instrument has not yet entered into force as, to date, it has been ratified by only one State (Norway). This leaves an important gap in the global liability and compensation framework, while a comprehensive and robust international liability and compensation regime is in place with respect to oil pollution from tankers (International Oil Pollution Compensation Fund regime),¹⁰ as well as with respect to bunker oil pollution from ships other than tankers (International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001).

Pollution from offshore oil exploration and exploitation

The Legal Committee of IMO finalized guidance to be taken into consideration by States when negotiating bilateral and/or regional arrangements or agreements on liability and compensation issues connected with transboundary oil pollution damage resulting from offshore exploration and exploitation activities (IMO, 2017e). The need for a global legal instrument has been considered at IMO since 2011, but no agreement has been reached. While the reluctance of IMO to deal with this issue appears to be related to its mandate, which focuses on ship-source pollution (IMO, 2014b), the continued absence of an international liability regime leaves an important gap in the international legal framework and is a matter of concern, in particular for potentially affected developing countries.

C. OTHER LEGAL AND REGULATORY DEVELOPMENTS AFFECTING TRANSPORTATION

1. Combating maritime piracy and armed robbery

The Maritime Safety Committee, in June 2017, reported a total of 221 piracy and armed robbery incidents worldwide in 2016, a decrease of about 27 per cent compared with 303 incidents in 2015. However, an increase of 77 per cent was observed in West Africa. Piracy off the coast of Somalia remained active, with eight incidents reported between January and April 2017, and around 39 crew members taken hostage. To address the possible underreporting of piracy and armed robbery incidents within the Gulf of Guinea region, the Maritime Safety Committee urged all concerned to report incidents in a timely manner to reporting organizations, to allow for better response and risk management (IMO, 2017a).

2. Legally binding instrument under the United Nations Convention on the Law of the Sea, 1982

Under this Convention, the seabed beyond the limits of national jurisdiction is subject to the principle of the common heritage of humanity, and resources found there are to be used for the benefit of humanity as a whole, and taking into particular consideration the interests and needs of developing countries (article 140). Marine genetic resources are commercially valuable and hold considerable potential for the development of advanced pharmaceuticals; their exploitation may in the near future become a promising activity in areas beyond the limits of national jurisdiction. In the absence of a specific international legal framework regulating related issues, negotiations have been ongoing since 2016 at the United Nations on key elements for an international legally binding instrument under this Convention, on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. The outcome of the fourth meeting of the preparatory committee established in accordance with General Assembly resolution 69/292 of 19 June 2015 (see <http://www.un.org/Depts/los/biodiversity/prepcom.htm>), held in July 2017, included a number of elements recommended for consideration by the General Assembly in the elaboration of a text. The suggested elements reflected convergence among most delegations during the discussions, and were not exclusive. The outcome also included a list of main issues related to these elements, on which there was divergence of views, as well as a recommendation to the General Assembly to take a decision, as soon as possible, on the convening of an intergovernmental conference. Suggested elements included, among others, the following: general principles and approaches; international cooperation; marine genetic resources, including questions on the sharing of benefits; measures such as area-based management tools, including marine protected areas; environmental impact assessments; and capacity-building and the transfer of marine technology. In this context, it is important for the special requirements of developing countries, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States and coastal African States, to be taken into account when drafting the instrument.

3. Seafarers' issues: International Labour Organization Work in Fishing Convention, 2007 (No. 188)

This Convention, which enters into force on 16 November 2017, aims to provide updated and comprehensive international labour standards for fishing workers.¹¹ Over 38 million people work in capture fisheries globally, in an industry that is one of the most dangerous professions

(International Labour Organization, 2016). Sustainable Development Goal 14, to conserve and sustainably use the oceans, seas and marine resources for sustainable development, includes several targets dedicated to fisheries, in particular targets 14.4, 14.7 and 14.b. Although the targets do not include direct references to the labour dimension of sustainable fishing, the rights of fishing workers are relevant in this context. Earlier studies have, for example, linked overfishing and illegal fishing to the increasing hazardousness and deterioration of working conditions for fishing workers (Environmental Justice Foundation, 2015; International Labour Organization, 2013a; Pocock et al, 2016). Due to conservation measures aimed at protecting fishing stocks from unsustainable fishing practices, fishing vessels may be forced to travel further out to sea, to hazardous and isolated environments, increasing the possibility for the abuse of fishing workers (International Labour Organization, 2013b). Other problems relate to the practice of flagging fishing vessels to countries that have inadequate labour protection regulations or using open registers that allow for the preservation of anonymity of ownership, which may complicate the issue of vessel labour inspection responsibilities (Food and Agriculture Organization of the United Nations, 2002).

The Work in Fishing Convention, 2007 (No. 188), establishes minimum labour standards for fishing workers on all types of commercial fishing vessels globally. Its objective is to “ensure that fishers have decent conditions of work on board fishing vessels with regard to minimum requirements for work on board; conditions of service; accommodation and food; occupational safety and health protection; medical care and social security” (International Labour Organization, 2007a). The Convention lists commitments undertaken by States Parties in these areas and requires them to implement and enforce national laws, regulations or other measures they have adopted to fulfil the commitments (article 6). The Convention addresses the work agreements of fishing workers, which shall be in writing (articles 16–20); recruitment and placement (article 22); and regular payment and means to transmit payments to their families at no cost (articles 23 and 24). Provisions related to social security protection aim to protect migrant workers’ rights, requiring States to “achieve progressively comprehensive social security protection for fishers, taking into account the principle of equality of treatment irrespective of nationality” (article 36 (a)). The Convention also establishes mechanisms for inspection, compliance and enforcement. In its capacity as a flag State, a State Party “which receives a complaint or obtains evidence that a fishing vessel that flies its flag does not conform to the requirements of this Convention shall take the steps necessary to investigate the matter and ensure that action is taken to remedy any deficiencies found” (article 43.1) and, in its capacity as a port State, if a State Party in whose port a fishing vessel calls “receives a complaint or obtains evidence

that such vessel does not conform to the requirements of this Convention, it may prepare a report addressed to the Government of the flag State of the vessel [and] may take measures necessary to rectify any conditions on board which are clearly hazardous to safety or health” (article 43.2). In addition, the Convention shall be applied “in such a way as to ensure that the fishing vessels flying the flag of any State that has not ratified this Convention do not receive more favourable treatment than fishing vessels that fly the flag of any member that has ratified it” (article 44). This article, along with port State control, may provide an incentive for a wider implementation of the Convention, to vessels flagged to States that are not Parties to the Convention.

Two sets of International Labour Organization guidelines provide practical guidance for the implementation of flag State and port State inspections (International Labour Organization, 2011 and 2017). In addition, the Work in Fishing Recommendation, 2007 (No. 199), provides guidance on the implementation of the Convention (International Labour Organization, 2007b).

D. POLICY CONSIDERATIONS

The use of new technologies in the maritime industry is associated with increased cybersecurity threats and risks. To ensure that ships navigate safely, important information on board and on shore remains secure and that seafarers and other staff are aware of the dangers and risks involved, Governments, public and private companies and other stakeholders should work together to better understand, assess, manage and implement new technologies. In implementing new technologies, cybersecurity should be carefully considered, along with other important issues, to facilitate risk reduction and mitigation efforts and to increase cybersecurity resilience. Collaborative approaches are important in this context, to raise awareness about possible cybersecurity threats, risks and consequences, and to effectively address these through information exchanges, coordination and dialogue, as well as by upgrading outdated systems, increasing the physical security of information technology facilities and data networks and providing cybersecurity training for employees. Where appropriate, cybersecurity elements should be mainstreamed into regulatory frameworks governing the maritime sector and regulatory compliance should be encouraged and supported. The enforcement of existing cybersecurity regulations is important, as is the development of additional standards and policies. In addition, best practices, guidance and standards adopted to date should be considered, along with the five functional elements in the IMO guidelines on maritime cybersecurity risk management, namely identify, protect, detect, respond and recover.

In the light of the entry into force and widespread adoption of the Paris Agreement under the United Nations Framework Convention on Climate Change,

ongoing efforts to reduce greenhouse gas emissions from international shipping should be pursued as a matter of urgency, including through the implementation of technical and operational measures, as well as innovative technologies for ships. Discussions on a global greenhouse gas reduction strategy should properly reflect and take into account the special needs of small island developing States and the least developed countries, to ensure progress and inclusiveness. With respect to ship-source air pollution, it is important for shipowners and operators to continue to consider and adopt various strategies, including installing scrubbers and switching to liquefied natural gas and other low-sulphur fuels. In addition, practical plans should be in place to implement the cap of 0.5 per cent on sulphur content in fuel oil used on board ships from 1 January 2020.

Given the importance of implementing and effectively enforcing strong international environmental regulations and in the light of the policy objectives inherent in Sustainable Development Goal 14, developed and developing countries are encouraged to consider becoming parties to relevant international conventions for marine pollution prevention and control, as a matter of priority. In this context, the entry into force of the Ballast Water Management Convention, 2004, in September 2017 may be noted. Widespread adoption and implementation of international conventions addressing liability and compensation for ship-source pollution, such as the International

Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2010, is also desirable, in view of the important gaps that remain in the international legal framework.

Progress is being made in ongoing negotiations at the United Nations on an international legally binding instrument under the United Nations Convention on the Law of the Sea, 1982 on the conservation and sustainable use of the marine biological diversity of areas beyond national jurisdiction. In this context, and in particular with regard to questions on the sharing of benefits from marine genetic resources, capacity-building and the transfer of marine technology, it is important for the special requirements of developing countries, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States and coastal African States, to be taken into account when drafting the instrument.

The entry into force of the Work in Fishing Convention, 2007 (No. 188), will assist the achievement of the Sustainable Development Goals, in particular those related to ocean governance and the sustainable use of the oceans and seas and of marine resources, including fisheries, by adding a labour and social sustainability dimension. All countries, in particular developing countries for which employment in capture fishing is important, may wish to consider becoming parties to this Convention.