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REDUCTION OF GHG EMISSIONS FROM SHIPS

Effective implementation of resolution MEPC.229(65) on Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships

Note by the Secretariat

SUMMARY

Executive summary: This document provides an overview of activities undertaken by the Secretariat in response to resolution MEPC.229(65) on *Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships* and IMO GHG Strategies, adopted in 2013.

Strategic direction, if applicable: 3

Output: 3.2, 3.4

Action to be taken: Paragraph 24

Related documents: MEPC 65/22; MEPC 69/5, MEPC 69/21; MEPC 74/18; MEPC 80/17; MEPC 81/7/1; MEPC.1/Circ.861; TC 72/2/1; TC 73/3(b) and TT-EG 4/4

Background

1 During MEPC 80, in expressing its appreciation for the Organization's technical cooperation programme and for the capacity-building projects delivered, the delegation of India requested the Secretariat to provide an update to the Committee on the status of the review of the effective implementation of resolution MEPC.229(65) on *Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships* (MEPC 80/17, paragraph 12.5).

Promotion of technical cooperation and transfer of technology

2 MEPC 62 (July 2011) adopted amendments to MARPOL Annex VI to include regulations on energy efficiency of ships (resolution MEPC.203(62)), introducing requirements concerning the EEDI and SEEMP. As part of these amendments, the Committee also agreed on a new regulation on *Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships* (regulation 29) which foresees that:

- .1 Administrations shall, in cooperation with the Organization and other international bodies, promote and provide support, as appropriate, directly or through the Organization to States that request technical assistance, especially developing States; and
- .2 the Administration of a Party shall cooperate 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 requirements of chapter 4 of this Annex, in particular regulations 19.4 to 19.6.

3 Following the adoption of the new energy efficiency regulations by MEPC 62, MEPC 65 (May 2013) adopted resolution MEPC.229(65) on *Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships*, requesting the Organization, through its various programmes, to provide technical assistance to Member States to enable cooperation in the transfer of energy efficiency technologies to developing countries in particular; and to further assist in the sourcing of funding for capacity-building and support to States, in particular developing States, which have requested technology transfer. The resolution explicitly recognizes that the transfer of technology needs to respect property rights, including intellectual property rights, under mutually agreed terms and conditions.

4 MEPC 65 also established an Ad Hoc Expert Working Group on Facilitation of Transfer of Technology for Ships (TT-EG), which was instructed to assess the potential implications and impacts of the implementation of the regulations in chapter 4 of MARPOL Annex VI, in particular on developing States, as a means to identify their technology transfer and financial needs, if any, and to identify and create an inventory of energy efficiency technologies for ships; identify barriers to transfer of technology, in particular to developing States, including associated costs, and possible sources of funding; and make recommendations, including the development of a model agreement enabling the transfer of financial and technological resources and capacity-building between Parties.

5 TT-EG met four times between April 2014 and October 2015, and in agreeing on the following outcomes of the Group, MEPC 69 (April 2016) considered that the Group had completed its work, as summarized in document MEPC 69/5, in line with the agreed timetable (MEPC 69/21, paragraphs 5.2 to 5.7) and:

- .1 noted the assessment of the potential implications and impacts of the implementation of the regulations in chapter 4 of MARPOL Annex VI, in particular on developing States, as a means to identify their technology transfer and financial needs, if any, as set out in annex 1 to the report;
- .2 noted also that the scoping document on the establishment of an inventory of energy efficiency technologies for ships, as set out in annex 2 to the report, had been forwarded to the GEF-UNDP-IMO project "Transforming the global

maritime transport industry towards a low carbon future through improved energy efficiency" (GloMEEP), and that an information portal for energy efficiency technologies for ships was expected to be developed by the end of June 2016 as part of the project (see "[Energy Efficiency Technologies Information Portal](#)" developed under the [GreenVoyage2050](#) Project);

- .3 noted further the identification of barriers to transfer of technology, in particular for developing States, including associated costs and possible sources of funding to support transfer of technology relating to the improvement of energy efficiency of ships, as set out in annex 3 to the report;
- .4 approved the *Model Agreement between Governments on technological cooperation for the implementation of the regulations in chapter 4 of MARPOL Annex VI*, as set out in annex 4 to the report, and requested the Secretariat to issue it as MEPC.1/Circ.861 (issued on 4 May 2016) to encourage its use by Member Governments; and
- .5 endorsed a set of recommendations to guide and assist Member States, industry and other entities within States in implementing the regulations in chapter 4 of MARPOL Annex VI, as set out in annex 5 to the report.

IMO's capacity-building and technical cooperation initiatives

6 Following the adoption of the energy efficiency regulations in MARPOL Annex VI in July 2011 and the resolution on Promotion of technical cooperation and transfer in 2013, the Secretariat stepped up its efforts in supporting Member States with the implementation of chapter 4 of MARPOL Annex VI.

7 Through the Organization's Integrated Technical Cooperation Programme (ITCP), the Secretariat has implemented numerous technical assistance activities in support of ratification and implementation of MARPOL Annex VI (see ITCP status reports submitted to the Technical Cooperation Committee (TCC)). TCC also established a global programme on "Effective implementation and enforcement of energy efficiency measures for ships", which was later renamed as "Supporting climate action and clean air in shipping" by TC 73 (see TC 73/3(b) by the Secretariat), to further support the implementation of activities in the area of energy-efficient shipping.

8 Building on the outcomes of the GloMEEP project, the Secretariat, with the support of external donors, initiated a number of other long-term projects in the area of GHG emissions reduction and improving the energy efficiency performance of ships, notably the establishment of the Global Maritime Technology Cooperation Centres (MTCC) Network (GMN project) in December 2017 with the support of EU funding.

IMO GHG Strategies

9 The 2018 Initial IMO Strategy on reduction of GHG emissions from ships (Initial Strategy) (resolution MEPC.304(72)) explicitly recognized (paragraph 1.3.2) the work undertaken by the Secretariat through the ITCP, the GloMEEP project and the MTCC network to address GHG emissions from ships in response to resolution MEPC.229(65).

10 The Initial Strategy also contained a specific section on "Barriers and supportive measures, capacity-building and technical cooperation; R&D", recognizing the special needs of developing countries, in particular least developed countries (LDCs) and small island developing States (SIDS), with regard to capacity-building and technical cooperation. It further

recognized that the Committee could assist the efforts to promote low-carbon technologies by facilitating public-private partnerships and information exchange, and that it should continue to provide mechanisms for facilitating information-sharing, technology transfer, capacity-building and technical cooperation, taking into account resolution MEPC.229(65).

11 In response to the relevant provisions in the Initial Strategy, the Organization expanded its portfolio of technical assistance and capacity-building activities supporting the reduction of GHG emissions from ships, notably through the rapid expansion of long-term projects. MEPC 74 (May 2019) established the [GHG TC-Trust Fund](#), to provide a dedicated source of financial support for technical cooperation and capacity-building activities to support the implementation of the Initial Strategy (see MEPC 74/18/Add.1, annex 17 and MEPC 81/7/1 by the Secretariat). Document TC 72/2/1 (Secretariat) provides detailed information on the TC work undertaken by the Secretariat to support the implementation of the energy efficiency requirements in MARPOL Annex VI and the Initial Strategy.

12 The [2023 IMO GHG Strategy](#) contains a full overview of the relevant initiatives and projects by the Organization supporting developing States in the reduction of GHG emissions from ships, as set out in appendix 2 of resolution MEPC.377(80). In recognizing that the decarbonization of shipping should be possible for all IMO Member States and may create new opportunities also for developing countries, including LDCs and SIDS, to take part in the value chain of the production and distribution of zero and near-zero GHG emission technologies, fuels and/or energy sources for international shipping, the 2023 IMO GHG Strategy (paragraphs 5.8 and 5.9) calls on the Committee to provide mechanisms for facilitating information-sharing, technology transfer, capacity-building and technical cooperation, taking into account resolution MEPC.229(65).

13 The 2023 IMO GHG Strategy further states that the Committee could assist the efforts to promote zero and near-zero GHG emission technologies, fuels and/or energy sources by facilitating public-private partnerships and information exchange (paragraph 5.7) and that in addition the Organization may, inter alia, initiate R&D activities and pilots, support enhanced technical cooperation, capacity-building activities and technology cooperation, and initiate efforts to explore renewable fuel production opportunities to be made available to international shipping, notably in developing countries, including LDCs and SIDS (paragraph 5.11).

Recent technology cooperation initiatives

14 In response to the reinforced call for partnerships, technical cooperation, capacity-building activities and technology cooperation in the 2023 IMO GHG Strategy, the Organization has recently commenced new initiatives with a more prominent focus on concrete technology cooperation, for instance through call for pilot project applications, the funding of (pre)feasibility studies, upscaling of local projects, supporting route-based action, the provision of project seed funding/grants/"gap funds", aiming at donor pooling and project risk capital reduction, and reinforced public-private partnerships.

15 In September 2023, [Phase 2 of the IMO GreenVoyage2050 project](#) was signed with the Government of Norway. Under Phase 2 of the project, partner countries will be eligible for increased funding for pilot projects, notably those that can catalyse the uptake of energy-efficient technologies and support countries in exploring opportunities for the production and provision of low-and zero-carbon fuels, linking the project even further to the global energy transition. Germany, Finland, France and the Kingdom of the Netherlands have already further supported the project through additional financial contributions.

16 The IMO-Singapore MPA [NextGen project](#) has been developing a collaborative global ecosystem of maritime transport decarbonization initiatives. In October 2023, the NextGen project organized a workshop identifying the potential for fostering cooperation along shipping routes with stakeholders across the whole value chain, and representing developed and developing States, to aggregate demand and support the energy transition.

17 In December 2023, EC announced a [second phase of the global MTCC network project](#) to upscale the work of the five regional centres, with a particular emphasis on pilot demonstrations aimed at achieving quantifiable reductions in GHG emissions in some of the most vulnerable countries (with a strong focus on LDCs and SIDS). Phase II will also increasingly focus on facilitating the introduction of portside energy efficiency measures and technologies and the retrofitting of domestic ships (under 5,000 GT).

18 The IMO-Saudi Arabia [IMO CARES](#) project which focuses specifically on technology solutions for domestic shipping and ports, recently initiated the [Maritime Technology Global Challenge](#) inviting technology providers to submit their decarbonization solutions geared towards ports and domestic vessels in Africa and/or the Caribbean with a view to expediting the adoption of green technology in developing countries. Up to four winning technology providers will be selected to receive funding to create bespoke technical proposals for the implementation of their solutions.

19 The IMO-Republic of Korea Sustainable Maritime Transport Training Programme (GHG SMART), launched in October 2020, aims at supporting SIDS and LDCs with the implementation of the 2023 IMO GHG Strategy via building sufficient human capacity in these countries through a set of annual training programmes. Participating SIDS and LDCs are trained on all aspects of the 2023 IMO GHG Strategy, according to their specific needs, which also includes, next to capacity-building in the IMO regulatory context, specialized training on related issues, such as alternative fuels, sustainable port operations and finance. In addition to the online Core Training, participants benefit from one-on-one targeted support, as well as from in-person practical training in the Republic of Korea.

20 The IMO-Republic of Korea [Future Fuels and Technologies](#) project is specifically aimed at showcasing latest developments in global developments and uptake of low- and zero-carbon marine technology and fuels. In January 2024, the project will launch a dedicated website which will serve as a global information hub to promote, share and facilitate access to the latest information on future fuels and technology among all Member States. It will contribute to reducing information access gaps among Member States, notably for developing countries, and informed decision-making by the Committee. The information hub will provide latest information about, inter alia, alternative marine fuel availability, bunkering locations, pricing, alternative fuel new-build orders, safety aspects and ship building capacity.

21 The [FIN-SMART Roundtable](#) is an IMO-EBRD-World Bank initiative, linking recipient and donor countries with international financial institutions (IFIs) and private banks to find financial solutions to support sustainable shipping and in particular to accelerate maritime decarbonization in developing countries, including in SIDS and LDCs. The Third FINSMART Roundtable took place in June 2023, with 16 beneficiaries, six donor countries and seven IFIs, focused discussions on ongoing and planned pilot projects in the area of maritime decarbonization with the aim to exchange financial best practices between the pilots, as well as to address their potential for upscaling.

Way forward

22 The Strategic Plan for the Organization for the six-year period 2024 to 2029 (A.1173(33)), adopted by the Assembly in December 2023, recognizes under strategic direction 3 (Respond to climate change and reduce greenhouse gas emissions from international shipping) that in implementing the 2023 IMO GHG Strategy particular attention should be paid to the needs of developing countries, in particular LDCs and SIDS. The Strategic Plan also includes a specific output (3.4) on the promotion of technical cooperation and transfer of technology relating to the reduction of GHG emissions from ships.

23 Accordingly, taking into account the considerations of the Committee, the Secretariat will consider and initiate additional technical cooperation and transfer of technology initiatives under the ITCP (in particular the Capacity-Building Decade 2021-2030 Strategy), the IMO GHG-TC Trust Fund and major projects that can assist developing States, in particular LDCs and SIDS, with the implementation of IMO GHG Strategies.

Action requested of the Committee

24 The Committee is invited to consider the information provided in this document; suggest any other initiatives that could be undertaken (at global and/or regional level); share bilateral technological cooperation initiated in accordance with MEPC.1/Circ.861; and to take action as deemed appropriate.
