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GHG EMISSIONS FROM SHIPS
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**CONSIDERATION OF CONCRETE PROPOSALS ON CANDIDATE
SHORT-TERM MEASURES**

Speed regulation followed by a goal-based measure

Submitted by France

SUMMARY

Executive summary: Considering the urgency to take early action to reach the objective of "peaking GHG emissions from international shipping as soon as possible", France proposes a two-step approach consisting of regulating ships' speed by sectors as soon as possible and, in a second run, adopting a global goal-based measure assigning to fleets an annual emission cap (FAEC) based on the emissions of each ship

Strategic direction, if applicable: 3

Output: 3.2

Action to be taken: Paragraph 23

Related documents: Resolution MEPC.278(70); resolution MEPC.304(72) and ISWG-GHG 4/2/8

Context

1 On 13 April 2018, IMO adopted resolution MEPC.304(72) defining its Initial Strategy on reduction of greenhouse gas emissions from ships. This document includes the definition of a level of ambition enabling the sector to contribute to achieving the temperature goals set by the Paris Agreement.

2 It also includes a list of candidate measures to achieve this level of ambition. These measures are categorized on the one hand into two categories: "those the effect of which is to directly reduce GHG emissions from ships" and "those which support action to reduce GHG emissions from ships", and on the other hand in chronological order:

- .1 short-term measures;
- .2 mid-term measures; and
- .3 long-term measures.

Analysis of the objectives fixed by the Initial Strategy

3 In chronological terms, the objectives of the Initial Strategy can be presented as follows:

- .1 an absolute short-term target: "to peak GHG emissions from international shipping as soon as possible";
- .2 a relative mid-term target: "to reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008"; and
- .3 an absolute long-term target: "to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals".

4 France remains strongly committed to help international shipping to reach the last two targets. Nevertheless, France considers that the latter will have their full effect on climate change only if the first one is achieved.

5 The absolute short-term objective of peaking GHG emissions as soon as possible is crucial to enable international maritime transport to contribute effectively to the Paris Agreement temperature goals and, in this context, is particularly important for pursuing efforts towards limiting the temperature rise to 1.5°C above pre-industrial levels, the objective of the Paris Agreement, the importance of which was highlighted by the latest IPCC report.

6 Indeed, climate change does not result from the annual level of GHG emissions, but from their cumulative amount in the atmosphere over the years.

7 Therefore, reducing absolute GHG emissions by 50% or more by 2050 will not be enough to achieve the desired effect on climate if this reduction does not start as soon as possible to minimize their cumulative total in the meantime.

Early measures

8 Paragraph 4.2 of the Initial Strategy indicates that "In aiming for early action, the timeline for short-term measures should prioritize potential early measures that the Organization could develop, [...] with a view to achieve further reduction of GHG emissions from international shipping before 2023".

9 The aim of the early measures is to achieve as soon as possible the peak of GHG emissions and start their decline.

10 By way of this document, France wishes to submit a proposal for this category of measures.

Prerequisites for early "short-term" measures

11 In order to achieve the desired objective, any anticipated measures must have the following characteristics:

- .1 they must come into application before 2023. This excludes the development of a new convention, which would take too long. Instead, an amendment to an existing instrument (the most relevant being MARPOL Annex VI) adopted by the tacit acceptance procedure will be needed. Although much faster than the explicit acceptance procedure, the latter nonetheless contains incompressible deadlines which imply that, for implementation before 2023, the amendment must be developed and firstly approved by MEPC 75 (spring 2020) at the latest;
- .2 they must address the existing fleet. Measures applying only to new ships, such as the strengthening of EEDI, have a limited immediate effect on GHG emissions as they only cover the fraction of the fleet that is renewed. In order to peak GHG emissions followed by a rapid reduction of them, the measures must therefore address the entire fleet, mostly with current technology, even if existing ships retrofits are possible. This means that the measures taken must be predominantly operational;
- .3 they must be based on existing instruments and available data. Here again, there is no time for the development of new instruments. Measures should be able to be implemented from already available tools such as the Ship Energy Efficiency Management Plan (SEEMP) and especially the IMO ship fuel oil consumption Data Collection System (DCS); and
- .4 they must consider the diversity of international shipping. Given the great diversity of ship types and activities, it is difficult and time consuming to agree on a common tool for the whole world merchant fleet. That is why it should be more efficient to design measures per large sets of ships covering one or several EEDI categories. These sets should be defined in order to guarantee a level playing-field between the ships, given that some sets would be able to progress faster than others.

A first and provisional step: speed regulation/optimization

12 Among the candidate early measures, speed regulation is often cited. This measure does indeed have several advantages:

- .1 recent history has proven it effective: after the 2008 financial crisis, to cope with the slowdown in global economic activity and the overcapacity of the fleet, companies have reduced the operational speed of their ships. This brought a significant decrease in global GHG emissions from ships as measured by the *Third IMO GHG Study 2014*. This real-life experiment leads to a double finding:
 - .1 it is possible, at least for certain sets of ships, to reduce the ship's operational speed; and
 - .2 this speed reduction leads to a significant emissions reduction; and

- .2 it can be implemented quickly: it is the only measure that requires little or no technical adaptation of the ships and several existing technological and legal means enable authorities to enforce ships' continuous or average speed.

13 However, it is not free of drawbacks:

- .1 it cannot apply to all ship type categories indifferently. In this respect, four large sets of ships, covering one or several EEDI categories, can be distinguished based on the recent experience of slow steaming:

- .1 those who were able to reduce their speed, who actually did and continue operating at a lower speed (case of containerships). Since the function linking the ship's speed and the emission level is not linear, a further speed reduction would hardly lead to any further significant emission reduction. For those ships, France recommends to further consider the revision of the phase 3 of the EEDI standards;

- .2 those who were able to reduce their speed and who actually did not or did but could do more, mainly for fear of losing a competitive advantage or because they were bound by contractual obligations. They have a significant additional emission reduction potential. It would therefore be wise to develop an international binding regulation which would frame and limit possible contractual obligations and mandate them to reduce their speed while maintaining a level playing-field;

- .3 those who were unable to reduce their speed for technical reasons, but mainly because of their very activity such as passenger ships; and

- .4 those for whom speed reduction is not desirable because it would necessarily result in a modal shift to more GHG-emitting modes of transport and, as a result, would lead to higher GHG emissions.

For these last two sets, the impossibility of reducing their speed does not prevent them from remaining at their current speed, like those of the first set. Nevertheless, all ships can encounter the occasional need to speed up for various reasons: safety, harbour constraints, shippers' requirements. Already zero-carbon emitting ships and those which already comply with the highest EEDI standards of their category would be exempted from the speed regulation.

Such principles should lead to effective and pragmatic measures and should therefore be negotiated and managed sector by sector in order to consider the diversity of the shipping industry. This can allow swift progresses in some sectors and therefore would be a very interesting early measure, nevertheless it cannot address the entire fleet with the same efficiency; and

- .2 it does not reward technological innovation, especially in the field of energy efficiency and transition to carbon-neutral modes of propulsion, which are integral for achieving the mid- and long-term objectives of the Initial Strategy.

14 Speed regulation is therefore an excellent transitory and early measure, but it can only be provisional.

A second step: a global goal-based approach

15 In a second step, a global goal-based approach would be substituted for the prescriptive speed regulation. This will both address the entire fleet and reward technological innovation.

Example of a possible global goal-based approach: the Fleet's Annual Emission Cap (FAEC)

16 The short-term objective to "peak GHG emissions from international shipping as soon as possible" and the mid-term one to "reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008" could be achieved by setting a global goal-based approach, by which each shipowner¹ would be required to annually peak its fleet's² GHG emissions.

17 In order to do so, shipowners could rely on the framework of the data collection system for fuel oil consumption of ships (resolution MEPC.278(70)), by which each ship will have reported to their flag Administration their annual consumption data by fuel type, which, together with their emission factors, will make it possible to know the quantity of GHG emitted by the ship in the year, along with its annual number of hours underway (under its own propulsion). This data could be used for the calculation of the fleet's annual emission cap.

18 The baseline for emissions could be that provided by the first exercise of the IMO fuel oil consumption data collection system for 2019, the results of which will be available in spring 2020. It should be defined taking into account new ships entering the fleet and external growth as well as the Initial Strategy's objectives. On this basis, shipowners would be required to arbitrate between different solutions in order to peak GHG emissions.

Proposal

19 France proposes that the Working Group and the Committee start working on developing a measure consisting of two steps.

20 First step, implemented as soon as possible: to define, by EEDI category, a speed regulation scheme including, among others:

- .1 the objective of the category: maintain or decrease speed;
- .2 the choice of the type of speed regulated (continuous or average) considering available data;
- .3 the mode of enforcement of the measure, using existing technological and legal means;
- .4 sanctions for non-compliance with individual objectives; and
- .5 the consideration of newcomers and specific situations.

¹ The definition of shipowner should be the same as the one used for the DCS regulation (resolution MEPC.278(70)).

² The "fleet" means all ships of the same shipowner.

For this task, document ISWG-GHG 4/2/8 (CSC) could be considered, as it does a rather exhaustive exploration of the possibilities of implementing such a measure and presents several solutions to take into account the problematic cases.

21 Second step, implementation after 2023: to design a global goal-based measure, such as the proposed FAEC, with the aim to peak and reduce the overall shipping GHG emissions by reducing gradually the annual emission of shipowners' fleets.

22 To this end, the Group should ask the Committee to call for proposals for the next Intersessional Working Group and mandate Parties to develop and submit for approval by MEPC 75 a draft amendment to MARPOL Annex VI, setting a measure similar to that described above.

Action requested of the Working Group

23 The Group is invited to consider the elements contained in this document and in particular to invite the Committee to schedule and initiate the work with the aim of being able to submit for approval by MEPC 75 a draft amendment to MARPOL Annex VI setting a speed regulation as an early measure, as presented in paragraphs 12, 13, 14 and 20, and a goal-based measure similar to that described in paragraphs 16, 17, 18 and 21 of this document.
