

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
2nd session
Agenda item 2

ISWG-GHG 2/2/16
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**FURTHER DEVELOPMENT OF THE STRUCTURE AND IDENTIFICATION OF CORE
ELEMENTS OF THE DRAFT INITIAL IMO STRATEGY ON REDUCTION OF GHG
EMISSIONS FROM SHIPS**

**Global speed management as an important component of an
ambitious initial IMO GHG Strategy**

Submitted by CSC

SUMMARY

Executive summary: In this document the Clean Shipping Coalition stresses the importance of peaking and reducing emissions from international shipping as soon as possible and presents information in support of the use of operational speed management to this end

Strategic direction: 7.3

High-level action: 7.3.2

Output: 7.3.2.1

Action to be taken: Paragraph 20

Related documents: MEPC 61/5/10, MEPC 61/INF.22; MEPC 64/5/8, MEPC 64/INF.14; MEPC 69/7/3; MEPC 71/7, MEPC 71/7/1, MEPC 71/7/2, MEPC 71/7/3, MEPC 71/7/4, MEPC 71/7/5, MEPC 71/7/6, MEPC 71/7/7, MEPC 71/7/8, MEPC 71/7/9, MEPC 71/7/20, MEPC 71/INF.35, MEPC 71/WP.5, MEPC 71/WP.7 and ISWG-GHG 2/2

Introduction

1 During the discussions at ISWG-GHG 1 on potential measures to reduce GHG emissions from international shipping, a number of delegations noted the potential of reduced operational ship speed to do so and supported inclusion of speed reduction in the list of candidate short-term measures as part of the initial IMO GHG Strategy.

2 The Clean Shipping Coalition has been studying the regulation of ship speed for GHG mitigation purposes for some years, is convinced that it has an important part to play in reducing the climate impact of shipping, and welcomes this new opportunity to consider the issue further. In particular, CSC believe that speed should be viewed in the context of the need to peak and reduce emissions quickly in the short-term, and that it has important implications for discussions on the level of ambition, and for the sectorial target that IMO must agree if the initial GHG Strategy is to be fit for purpose.

Operational speed management and early peaking of emissions

3 Documents MEPC 71/7/8 and MEPC 71/7/14 proposed elements of a globally agreed target for international shipping consistent with the goals of the Paris Agreement. Specifically, document MEPC 71/7/8 argued that, "in order to be able to contribute to the global temperature goal, emissions have to start declining soon and in the second half of the century, emissions have to decline towards zero". This timeframe and speed of decarbonization of the sector can be further justified by a "fair share" approach whereby cumulative maritime emissions do not exceed shipping's historical share of the remaining global carbon budget consistent with the RCP 2.6 scenario. To achieve this, document MEPC 71/7/14 argued that "an emissions trajectory consistent with the goal of the Paris Agreement means ship emissions must peak early".

4 Indeed it is clearly in the interests of the shipping industry that its emissions peak sooner rather than later. Like any other industry, shipping is subject to a finite carbon budget where each tonne of GHG can only be emitted once. In this context, an early peaking of emissions brings two very distinct benefits:

- .1 a shallower subsequent emissions reduction pathway; and
- .2 the possibility to decarbonise over a longer time horizon.

The former will make the transition process less disruptive to the industry and the latter will mean more time for the deployment of new technologies, including alternative fuels and energy sources that a future fossil fuel-free shipping industry will need.

5 With BAU emissions from international shipping projected to grow strongly in the years ahead, speed reduction is perhaps the only regulatory option capable of achieving in the short term the reductions necessary to peak early and substantially reduce emissions.

Previous Clean Shipping Coalition work on speed reduction

6 In 2011, Clean Shipping Coalition member organizations Seas at Risk and Transport & Environment, commissioned a major study into the options, costs and benefits of regulating ship speed. A summary of the report of the study is contained in document MEPC 64/INF.14, and the full study report can be downloaded here: www.cleanshipping.org/download/Slow-steaming-CE-Delft-final.pdf. The study's main findings were as follows:

7 Slow steaming has significant multiple environmental benefits. A modest 10% reduction in fleet average speed already results in a 19% reduction of fuel consumption and CO₂ emissions even after accounting for the emissions associated with the construction and operation of the additional ships needed to deliver the same amount of transport work. Emissions of SO_x, NO_x and PM will decrease in line with fuel use. Lower ship speeds will also reduce whale strikes, underwater noise pollution and other harmful wildlife interactions.

8 Slow steaming has significant advantages. The direct economic benefits (fuel savings) and external environmental and social benefits (impacts of emissions on human health and ecosystems and climate impacts) of slow steaming easily outweigh associated direct (crew and capital costs of ships) and indirect economic costs (additional inventory costs and adjustment of logistical chains). This result is robust for a number of fuel price assumptions and discount rates. Implemented correctly, regulated slow steaming is cost free to the shipping industry as a whole and only entails marginal incremental logistic and supply chain costs to consumers.

9 There are very few, if any, evident technical obstacles to slow steaming. Even at very low engine loads, few problems have been encountered and any remaining issues could be surmounted by small changes to operational procedures and sharing of best practices. Hence, it appears that there are very few technical constraints to slow steaming.

10 Regulated slow steaming is legally feasible. It can be agreed globally at IMO or imposed by a State on the ships flying its flag; and it can also be set as a condition of port entry for journeys in the Exclusive Economic Zone (EEZ) and the high seas.

11 Regulated slow steaming is feasible to implement in practice. It is relatively easy to monitor and enforce, and may have a more cost effective administrative burden than some of the alternative measures. Using (S-)AIS, maximum or average ship speed can be monitored, both by ships and by regulators, and reported to regulators with little additional effort. Enforcement can also be based on existing port State control instruments.

12 Regulated slow steaming delivers emissions cuts in-sector. Immediately. It ensures that emissions in the shipping sector will be reduced from business-as-usual levels, regardless of the fuel price and demand for shipping.

13 A cap on (operational) speed would reduce the possibility of an otherwise likely large and long-term spike in emissions if ships speed up in response to a recovery in demand.

14 In short, speed reduction is an effective way to reduce emissions without any significant technical or operational obstacles. Emission reductions are immediate and in-sector; a critical consideration.

15 The Third IMO GHG Study 2014 provided substantial additional empirical evidence as to the feasibility and effectiveness of operational speed reduction to reduce emissions, with lower ship speeds making a large contribution to falling emissions in the wake of the 2007 economic crisis. However, a recently completed ICCT study bringing the emissions inventories up to date (see document ISWG-GHG 2/4/1 shows operational ship speeds (and emissions) starting to rise again. This is a clear and worrying development and the Working Group will need to consider the question of rising average ship speeds carefully.

New Clean Shipping Coalition analysis on speed reduction

16 Building on this earlier study, Seas at Risk and Transport & Environment have commissioned further updated analysis of various speed reduction scenarios and their impact on global emissions. The report of the analysis was not ready in time for the submission deadline for ISWG-GHG 2 but will be finalised before the meeting takes place and made available for download here <http://www.cleanshipping.org/download/Slow-steaming-CE-Delft-final-2.pdf>.

17 The study will investigate emissions reductions from containerships, bulk carriers and tankers based on three speed reduction scenarios: (i) speed reductions which would result in a return to the fleet of all ships that are currently laid up or idle; (ii) in addition to mobilizing the laid up fleet, the incremental speed reduction at which new building and scrapping rates would return to their 10-year average value; and (iii) a percentage speed reduction beyond that in scenario (ii).

18 With different types and sizes of ships designed to sail at different speeds, a uniform percentage speed reduction for the whole fleet would be inappropriate. Therefore, in all scenarios, ship (operational) speed reduction is differentiated by ship class and size.

19 The study will also investigate, inter alia, the following policy approaches for operationalising regulated speed management:

- .1 Direct regulation of (operational) speeds only:
 - .1 Ships are required to keep their speed over ground below a maximum value enforced globally via flag States; and
 - .2 Ships are required to keep their average speed below a certain maximum value on specific routes, while compliance is set as a condition of entry into a port.
- .2 Regulation of speeds with flexibility:
 - .1 Ships can either comply with the required speed set in 1.1, or demonstrate that they can take equivalent measures that result in the same reduction of fuel consumption per mile (or per tonne-mile) as they would have achieved by reducing (operational) speed. This means that the speed limit would not be expressed in knots but in tonnes of fuel; and
 - .2 Ships can either comply with the speed limit set in 2.1, or demonstrate that they have taken equivalent measures that result in the same reduction of fuel consumption per mile (or per tonne-mile) as they would have by reducing speed. This means that the speed limit would not be expressed in knots but in tonnes of fuel.

Action requested of the Working Group

20 The Working Group is invited to take account of both previous CSC analyses of speed reduction and the findings of the most recent study when further developing the initial IMO GHG Strategy.
