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MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
57th session  
Agenda item 4

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## PREVENTION OF AIR POLLUTION FROM SHIPS

### Comments on the report on the outcome of the informal Cross Government/Industry Scientific Group of Experts

Submitted by China

#### SUMMARY

<i>Executive summary:</i>	This document comments on the report on the outcome of the informal Cross Government/Industry Scientific Group of Experts, and contains a proposal for the reduction of sulphur oxides emissions from ships
<i>Strategic Direction:</i>	7.3
<i>High-level Action:</i>	7.3.1
<i>Planned output:</i>	7.3.1.1
<i>Action to be taken:</i>	Paragraph 10
<i>Related documents:</i>	MEPC 56/4/15, MEPC 56/23 and MEPC 57/4

#### Introduction

1 This document is submitted in accordance with the provisions of paragraph 4.10.5 of the Guidelines on the Organization and methods of work of the Committees and their subsidiary bodies (MSC-MEPC.1/Circ.1), providing comments on the report on the outcome of the informal Cross Government/Industry Scientific Group of Experts, and also contains a proposal for the reduction of sulphur oxides emissions from ships.

#### Background

2 The Marine Environment Protection Committee at its fifty-sixth session endorsed the Secretary-General's proposal to set up an informal Cross Government/Industry Scientific Group of Experts to undertake a comprehensive study to evaluate the effects of the different fuel options proposed under the revision of MARPOL Annex VI. The Scientific Group of Experts has finished its work and submitted a report on the outcome of study to BLG 12 (BLG 12/6/1) and MEPC 57 (MEPC 57/4).

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3 China firmly supports the adoption of measures to minimize air pollution from international shipping. However, being aware that the measures on the reduction of SO<sub>x</sub> emissions may lead to an increase in CO<sub>2</sub> emission, China prefers to take a holistic approach to reduce air pollution from all possible marine sources in a balanced manner, and believes that it is necessary to adopt, at the earliest time possible, a reasonable and practical fuel option without delaying the implementation of the new SO<sub>x</sub> emissions reduction standards.

## Comments

4 In the report, the air pollutant dispersion modelling study based on the EMEP (European Monitoring and Evaluation Programme) indicates that, compared with the current MARPOL Annex VI regulations, option B will result in a 52% reduction in SO<sub>2</sub> and a 54% reduction in PM from international shipping respectively in 2020. The report also shows that the CO<sub>2</sub> emissions from the global refining industry in the 2020 demand scenario of option B1 are estimated to be 1,141 million tons per year, with 2.3% increase of CO<sub>2</sub> emissions compared with the IMO base case which is estimated to be 1,115 million tons. Although the CO<sub>2</sub> emissions in the 2020 demand scenario of option B are not estimated in the report, they must be less than that of option B1. Furthermore, in order to meet the demand of marine fuel in the option B case, the world refining industry only needs to conduct minor unit adjustments with minor investment.

5 Comparing with the current MARPOL Annex VI regulations, option C will result in a 65% reduction in SO<sub>2</sub> and a 67% reduction in PM from international shipping respectively in 2020. However, the estimated CO<sub>2</sub> emissions from the global refining industry in 2020 demand scenario of option C will reach 1,248 million tons per year, increasing 11.9% over that of the existing IMO fuel standards. The report further states that the global distillate case would require very significant additional unit capacities and significant investment, which is estimated at 126 billion US dollars. Therefore the major revamp or addition of units required for option C typically needs to shutdown the refinery for several months and takes 5 years or even more.

6 Despite the advantages in reducing the workload of the crew, minimizing the environmental impact in case of oil spills, and simplifying engine maintenance procedures, the implementation of option C will inevitably lead to a drastic increase in the demand of the distillate, thus bringing a significant price rise of the marine fuels. According to a rough estimation, the shipping cost would increase 40 billion US dollars every year by the implementation of option C. The report also indicates that a significant problem would exist for meeting the demand for new hydrocracking and coking units which are required by option C, therefore the feasibility of option C is not sure at the current stage.

7 With regard to option C2, although the report shows that it would result in the same reductions of option C, the capital cost of purchasing and installing abatement equipment is likely to be 4 to 7 million US dollars per ship (2007 prices) depending on the number of engines and installed power. This means that shipowners not only have to pay a higher cost, but also have to settle the problems of ship conversion and treatment of washwater, etc. In addition, with currently available technologies, NO<sub>x</sub> and SO<sub>x</sub> abatement techniques may be mutually exclusive in a single ship, and how to apply NO<sub>x</sub> and SO<sub>x</sub> abatement techniques on a single ship becomes an unavoidable problem.

8 In light of the above, China believes that option B, which would achieve a similar reduction of SO<sub>x</sub> and PM as comparable to option C and C2, is far more feasible and practicable. And option B will also result in much less CO<sub>2</sub> emission than option C.

## **Proposal**

9 In view of the urgent need to address air pollution from international shipping and taking into account the feasibility of each different fuel option, China appreciates very much the approach adopted in option B, however, bearing in mind that the report indicates lowering the global marine fuel cap to 3.5% in a 2012 demand scenario (309Mt/y) can be easily achieved by residue desulphurization without distillate blending, and the refining investment required can be controlled at around 1 billion US dollars. Obviously, this measure would further reduce the emission of SO<sub>x</sub> and PM without causing any structural impact on the refining industry and the supply of marine fuel oil. In this context, China would like to propose to lower the global cap of option B to 3.5% and keep the SECA limits unchanged.

## **Action requested of the Committee**

10 The Committee is invited to consider the above and take action as appropriate.

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