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Agenda item 11 - Other matters

INFORMATION ON WORK ON CARBON CAPTURE AND STORAGE IN SUB-SEABED GEOLOGICAL FORMATION AND OCEAN FERTILIZATION UNDER THE LONDON CONVENTION AND LONDON PROTOCOL

Note by the International Maritime Organization

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SUMMARY

This document reports on the recent achievements of the Contracting Parties to the London Convention and Protocol on the topics mentioned below.

CO_2 sequestration in sub-seabed geological formations: The current 39 London Protocol Parties have created a basis for CO_2 sequestration in sub-seabed geological formations in international environmental law and developed regulatory tools to protect the marine environment when such activities are undertaken. In so doing, they created an enabling environment for long-term investment decisions in CO_2 sequestration projects in sub-seabed geological formations.

Ocean fertilization: The current 86 London Convention Parties and the Protocol Parties have declared themselves the competent international bodies to regulate legitimate scientific research into ocean fertilization and to prohibit commercial activities in this field. The basis for regulation of this activity in international environmental law, i.e. a resolution and/or amendment, is still being discussed aimed at a decision by Parties in 2011.

Introduction and background

1 The objectives of the London Convention 1972 (LC) with currently 86 Parties and its planned successor, the London Protocol 1996 (LP), with currently 39 Parties are to: "(1) protect and preserve the marine environment from **all** sources of pollution and (2) take effective measures.... to prevent, reduce and where practicable eliminate pollution caused by dumping or incineration at sea of wastes...".

CO_2 sequestration in sub-seabed geological formations under the London Protocol

2 In 2006, Parties to the London Protocol adopted amendments under resolution LP.1(1) to regulate CO_2 sequestration in sub-seabed geological formations, aimed at permanent isolation of the CO_2 injected, and to prohibit liquid CO_2 discharges directly into the deep oceans, because of its uncontrollability. These amendments are in force since February 2007 and provide a basis in international environmental law to regulate this activity through a licensing system under the Protocol. This decision is based on the distinction that protection of the oceans, being part of the 'global commons' requires internationally agreed standards, whereas the use of *terrestrial* geological formations for CCS is subject to national law.

3 Since 2006, both the "Risk Assessment and Management Framework for CO_2 Sequestration in Sub-seabed Geological Structures" and the "Specific Guidelines for Assessment of Carbon Dioxide Streams for Disposal into Sub-seabed Geological Formations" have been adopted to implement this amendment, so that the suitability of proposed sequestration projects can be judged by a Party's Administration. A specific reporting format for active CO_2 sequestration projects was adopted in 2008, as it is very important to archive documentation informing future generations of the existence of any CO_2 reservoir and its history. In 2009, Parties amended Article 6 of the London Protocol under Resolution LP.3(4) concerning the export of wastes for dumping purposes, aimed at enabling Parties to share *transboundary* sub-seabed geological formations for sequestration projects, on the condition that the protection standards of the London Protocol are fully met. This amendment will take some years before entry into force, but the potential it offers might be of interest to countries sharing marine resources (e.g., the North Sea, the Persian Gulf, etc). Finally, Parties adopted, in 2010, a work plan with timelines to review the 2007 CO_2 Sequestration Guidelines in light of the 2009 amendments and launched the start of this review aimed at its completion in 2012.

4 Thus far no CO_2 sequestration permits have been reported to IMO, but Parties regularly report at their meetings on the research and development projects that are being undertaken.

Activities undertaken towards regulation of ocean fertilization

5 The first concerns with ocean fertilization were raised in the LC/LP Scientific Groups' session held in June 2007. The Scientific Groups issued, at that session, a "Statement of Concern" and took the view that "knowledge about the effectiveness and potential environmental impacts of ocean iron fertilization currently was insufficient to justify large-scale operations and that this could have negative impacts on the marine environment and human health".

6 These concerns led LC/LP Parties to agree in 2007 to work towards regulation of ocean fertilization. Based on their overall objective to protect and preserve the marine environment from all sources of pollution, they declared themselves competent in this field although ocean fertilization is regarded as 'placement' rather than as 'dumping' and adopted, in 2008, resolution LC-LP.1 (2008) allowing only "legitimate scientific research" on the

understanding that ocean fertilization activities other than such legitimate research should not be allowed under the present state of knowledge.

7 The governing bodies adopted, in 2010, resolution LC-LP.2(2010) on the "Assessment Framework for Scientific Research Involving Ocean Fertilization" (see the resolution text attached in annex hereto), which had been developed since June 2007 and as required under resolution LC-LP.1(2008). This Assessment Framework[1] guides Parties as to how proposals they receive for ocean fertilization research should be assessed and provides criteria for an initial assessment of such proposals and detailed steps for completion of an environmental assessment, including risk management and monitoring.

8 The governing bodies agreed that further work should be undertaken, intersessionally, by the Working Group on Ocean Fertilization, to be convened in June 2011 and reporting to the next session of the governing bodies in 2011. It was also agreed that the overall aim of this work would be to "establish a global, transparent and effective control and regulatory mechanism for ocean fertilization activities and other activities that fall within the scope of LC and LP and have the potential to cause harm to the marine environment".

9 Further information on the activities under the London Convention and Protocol can be obtained at www.londonprotocol.imo.org

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[1] The text of this Assessment Framework can be found in document LC 32/15, annex 6.

RESOLUTION LC-LP.2(2010)
ON THE ASSESSMENT FRAMEWORK FOR SCIENTIFIC RESEARCH INVOLVING OCEAN FERTILIZATION

(Adopted on 14 October 2010)

THE THIRTY-SECOND CONSULTATIVE MEETING OF THE CONTRACTING PARTIES TO THE LONDON CONVENTION AND THE FIFTH MEETING OF THE CONTRACTING PARTIES TO THE LONDON PROTOCOL,

RECALLING the objectives of the London Convention[2] and the London Protocol[3],

CONFIRMING that the "Statement of concern" of the Scientific Groups remains valid,

RECALLING resolution LC-LP.1(2008) on the regulation of ocean fertilization and the agreement therein that the Scientific Groups under the London Convention and the London Protocol should develop an assessment framework for ocean fertilization to assess research proposals on a case-by-case basis,

1. **ADOPT** the 'Assessment Framework for Scientific Research Involving Ocean Fertilization' (hereafter referred to as the Assessment Framework), as set out in annex hereto,

2. **DECIDE** that, in accordance with paragraph 4 of resolution LC-LP.1(2008), scientific research proposals should be assessed on a case-by-case basis using the Assessment Framework;

3. **DECIDE FURTHER** that Contracting Parties should use the Assessment Framework to determine, with utmost caution, whether a proposed ocean fertilization activity constitutes legitimate scientific research that is not contrary to the aims of the London Protocol or the London Convention;

4. **EMPHASIZE** that the consultation, notification and reporting provisions of the Assessment Framework are integral to the assessment of a proposed ocean fertilization research activity, and that timely notification and sharing of information would facilitate consistency in its application;

5. **AFFIRM** that the London Convention and the London Protocol should continue to work towards providing a global, transparent, and effective control and regulatory mechanism for ocean fertilization activities and other activities that fall within the scope of the London Convention and the London Protocol and have the potential to cause harm to the marine environment, particularly in light of the progress made with this resolution, resolution LC-LP.1(2008), and the Assessment Framework;

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[2] "Contracting Parties shall individually and collectively promote the effective control of all sources of pollution of the marine environment, and pledge themselves especially to take all practicable steps to prevent the pollution of the sea by the dumping of waste and other matter that is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea." (Article I of the London Convention).

[3] "Contracting Parties shall individually and collectively protect and preserve the marine environment from all sources of pollution and take effective measures, according to their scientific, technical and economic capabilities, to prevent, reduce and where practicable eliminate pollution caused by dumping or incineration at sea of wastes or other matter. Where appropriate, they shall harmonize their policies in this regard." (Article 2 of the London Protocol).

6. **REAFFIRM** that for activities, including ocean fertilization research activities, that fall within the scope of Article III(1)(a) of the London Convention or Article 1.4.1 of the London Protocol, and are not otherwise exempted from being "dumping", placement of matter for a purpose other than the mere disposal thereof which is contrary to the aims of the London Convention or the London Protocol does not fall within the exemption under Article III(1)(b)(ii) of the London Convention and Article 1.4.2.2 of the London Protocol and should be regarded as "dumping"; and

7. **RESOLVE** that this resolution and the Assessment Framework should be reviewed at appropriate intervals in light of new and relevant scientific information and knowledge and in light of experience applying the Assessment Framework.

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