

ANNEX 7

**REVISED GUIDANCE ON THE NATIONAL IMPLEMENTATION
OF THE LONDON PROTOCOL**

Revised Guidance on National Implementation of the London Protocol

Preface: the mandate for and purpose of the revised guidance

In 2015, the governing body of the London Protocol approved¹ work to revise the "Guidance on National Implementation"² document with a view to increasing ratifications of the London Protocol. This Guidance replaces the *Guidance on the National Implementation of the 1996 Protocol to the London Convention 1972*, which was adopted in 2001.

The importance of increased ratification is clear: at the time of the eleventh meeting of the Contracting Parties to the London Protocol in 2016, only 47 States had ratified or acceded to the Protocol, and four of the 18 Contracting Parties to the Convention that were signatories to the London Protocol had not yet ratified it. Within the governing body of the London Protocol, there has been increasing concern at the low annual increase of accessions to and ratifications of the Protocol³. The Strategic Plan for the London Convention and London Protocol, adopted by the Contracting Parties in 2016, includes four strategic directions, one of which is to "promote the ratification of or accession to the London Protocol." This strategic direction is, in turn, supported by four actions, including "provide for specific technical and legal assistance and support to countries wishing to ratify or accede to the London Protocol."

This Guidance describes what action States should take at the national level in order to fully implement the provisions of the Protocol⁴. It may also benefit officials in countries, regardless of whether they are currently Parties to the London Protocol, who are seeking support to develop or enhance their measures implementing the Protocol, particularly with regard to their domestic legislative and other measures to implement the Protocol.

This document only constitutes guidance, and is intended to assist national administrations in implementing the London Protocol, whether they are currently Contracting Parties or simply interested in becoming Parties. It is not to be construed as providing definitive interpretations of the Protocol or how its provisions should be applied. It remains at all times the prerogative of Contracting Parties to interpret the obligations to which they have become bound under the Protocol.

¹ See paragraph 8.43.2 of the report of the thirty-seventh Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and the tenth Meeting of Contracting Parties to the 1996 Protocol to the London Convention, 1972 (London Protocol): LC 37/16 22 October 2015.

² Guidance on the National Implementation of the 1996 Protocol to the London Convention 1972 (Adopted in 2001).

³ See paragraph 2.3 of the report of the Thirty-Eighth Consultative Meeting of Contracting Parties to the London Convention & Eleventh Meeting of Contracting Parties to the London Protocol: LC 37/16 22 October 2015.

⁴ By implementing the London Protocol, parties to the United Nations Convention on the Law of the Sea may fulfil their obligations under Article 210 of that treaty to take legislative measures to prevent marine pollution by dumping.

TABLE OF CONTENTS

Preface: the mandate for and purpose of the revised guidance	2
Introduction	5
The 1996 London Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972	5
The benefits of being a Contracting Party to the Protocol	5
Implementation	5
The importance of implementation	5
Monism and dualism	6
Implementation by binding norms	6
Existing laws	7
Minimum set of obligations to be implemented by binding norms	7
Checklist for the legislator	8
Imposition of a stricter regime at national level	8
Amendments to the Protocol	8
Article 21.5: ratification after entry into force of an amendment	9
The general rule	9
The exception to the general rule when two thirds of Contracting Parties agree ..	9
Amendments that have not entered into force before a state becomes a Contracting Party	9
Relationship between the revised guidance and other key documents	9
Review of the provisions of the 1996 Protocol to the Convention on the Prevention Marine Pollution by Dumping of Wastes and Other Matter, 1972 (as amended)	10
Article 1: Definitions	10
Text of Article	10
Are there special issues to be considered for implementation?	12
Implement by binding norms?	14
Other information	14
Article 2: Objectives	14
Text of Article	14
Are there special issues to be considered for implementation?	14
Implement by binding norms?	15
Article 3: General Obligations	15
Text of Article	15
Are there special issues to be considered for implementation?	16
Implement by binding norms?	18
Article 4: Dumping of Wastes or Other Matter	18
Text of Article	18
Are there special issues to be considered for implementation?	18
Implement by binding norms?	19
Other information	21
Article 5: Incineration at Sea	21
Text of Article	21
Are there special issues to be considered for implementation?	21
Implement by binding norms?	21
Article 6: Export of Wastes or Other Matter	22
Text of Article	23
Are there special issues to be considered for implementation?	23
Implement by binding norms?	22
Article 7: Internal Waters	23
Text of Article	23
Are there special issues to be considered for implementation?	23
Implement by binding norms?	23

Article 8 Exceptions	24
Text of Article	25
Are there special issues to be considered for implementation?	25
Implement by binding norms?.....	27
Other information.....	27
Article 9: Issuance of Permits and Reporting	29Error! Bookmark not defined.
Text of Article	28
Are there special issues to be considered for implementation?	29
Implement by binding norms?	29
Other information.....	29
Article 10: Application and Enforcement.....	30
Text of Article	30
Are there special issues to be considered for implementation?	31
Implement by binding norms?	31
Other information.....	32
Examples	32
Article 11: Compliance Procedures	32
Text of Article	32
Are there special issues to be considered for implementation?	32
Implement by binding norms?	32
Other information.....	32
Article 12 Regional Cooperation	35
Text of Article	34
Are there special issues to be considered for implementation?	34
Implement by binding norms?	34
Other information.....	34
Article 13: Technical Cooperation and Assistance	34
Text of Article	34
Are there special issues to be considered for implementation?	35
Implement by binding norms?	35
Other information.....	36
Annex 1: Wastes or Other Matter that may be considered for Dumping	39
Text of Annex	38
Are there special issues to be considered for implementation?	39
Implement by binding norms?	40
Annex 2 Assessment of Wastes or Other Matter that may be considered for Dumping.....	39
Text of Annex	39
Are there special issues to be considered for implementation?	43
Implement by binding norms?	44
Other information.....	44
2006 amendment of the Protocol	44
Text of amendment	44
Are there special issues to be considered for implementation?	45
Implement by binding norms?	46
Other information.....	46
2009 amendment of the Protocol	46
Text of amendment	46
Are there special issues to be considered for implementation?	46
Implement by binding norms?	47
Other information.....	47
Examples	48

2013 amendment of the Protocol	48
Text of amendment	48
Art. 1	48
Art. 6 <i>bis</i>	48
Annex 4.....	49
Annex 5.....	49
Are there special issues to be considered for implementation?	55
Implement by binding norms?	56
Other information.....	56
Appendix: The legislator's checklist	57

Introduction

The 1996 London Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972

1. This Guidance relates to the 1996 Protocol (the Protocol) to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the Convention).
2. Between 1950 and the early 1970s, dumping of waste materials into ocean waters was recognized as a major threat to the health of the world's oceans and coastal waters. In order to support a global goal to protect marine waters, states negotiated the Convention, one of the first international instruments for the protection of the marine environment from human activities.
3. In 1996, the governing body of the Convention adopted the Protocol as a standalone treaty to modernize and tighten global dumping controls and replace the Convention. The Protocol entered into force on March 24, 2008. The objectives of the Protocol are set out in Article 2: 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.
4. Under the Protocol, all dumping is prohibited, with the exception of certain listed categories of wastes or other matter, which may be considered for dumping provided that permits and permit conditions comply with the waste assessment provisions set out in Annex 2 of the Protocol.

The benefits of being a Contracting Party to the Protocol

5. When a state becomes a Contracting Party to the Protocol it gains significant benefits, which are described in the document approved by the Governing Bodies of the London Protocol and London Convention on the "Benefits of being a Party to the London Protocol"⁵.

Implementation

The importance of implementation

6. Once the Protocol has entered into force for a State, the Protocol places international obligations on it vis-à-vis other Parties; there will be a breach of international law if that State fails to comply with those obligations. Moreover, if a Contracting Party's implementation is flawed, it undermines the Protocol's global regime to protect and preserve the marine environment. So all Contracting Parties have a mutual interest in securing full implementation.

⁵ *Ibid*, Annex 5.

Monism and dualism⁶

7. A State with a *dualist* legal system needs to have implementing measures in its national legal system to give effect to an international agreement; accordingly implementing measures, including any necessary legislative measures, should be in place in a dualist state before an international agreement enters into force for that state.
8. Once a State with a *monist* legal system becomes a Contracting Party to an international agreement that has entered into force, the agreement has the force of law in that State. But even a state with a monist system may, where the international agreement's obligations so require, need to adopt measures to fully implement the agreement, for example where there are provisions in the agreement that are not self-executing⁷. For these reasons, it is recommended that monist states carefully assess whether further action to impose legally binding norms is advisable.

Implementation by binding norms

9. In this Guidance, "binding norms" refers to norms, or rules, that have legal effect at the national level within a Contracting Party. Binding norms may be adopted by Contracting Parties' legislative branches. Binding norms may also be regulations or other subordinate legislation adopted by Contracting Parties' executive branches to make Protocol obligations effective in their national legal systems. Some Contracting Parties may have constitutions that allow norms to be introduced simply and administratively.
10. In a monist state the act of ratification of a treaty may automatically incorporate it into national law; so in such states international law *is* domestic law – or may even take precedence over it – and self-executing provisions in treaties may become binding norms with legal effect that are enforceable in the national courts.
11. In any event, where national measures are introduced to implement international obligations it becomes much easier to understand which rules apply at the national level; and if the national measures are set out in one coherent instrument they become more comprehensible and accessible for stakeholders. Moreover it may be necessary to appoint and/or create an authority to enforce or administer a self-executing provision, and to give such an authority powers (such as powers to enter or search property) to enable that authority thoroughly to enforce or administer a self-executing provision;

⁶ "Monism" and "dualism" describe different approaches to the relationship between international and national law.

Dualism emphasizes the distinct and independent character of international and national legal systems so that international law applies in whole or in part within a dualist state, for example the United Kingdom, only if there is a national rule giving effect to international law.

Monist states, for example the Netherlands, work on the basis that national and international law form one single legal order which should be presumed to be coherent and consistent, and on that basis international law can be applied directly within the national legal order once that state has agreed to be bound by a treaty.

⁷ The precise meaning of "self-executing" has been discussed at length by academia and the courts; for the purposes of this Guidance it suffices to explain that a self-executing provision in a treaty is a provision that may be enforced in the courts without prior legislation.

- and it may be necessary to introduce sanctions for failure to comply with the self-executing provision.
12. It is inevitable that Contracting Parties will supplement binding norms with individual and specific administrative actions by competent authorities in order fully to implement the Protocol. So, for example, whilst it will be necessary to establish a permitting system by introducing binding norms there will need to be individual administrative acts – such as decisions on whether to grant individual permits– in order to apply those norms.
 13. It is also inevitable that Contracting Parties will implement the Protocol in ways that are appropriate to their own constitutions and policy choices. So "binding norms" speaks to the legal effect of a measure rather than what branch of government adopts the norm; this shorthand reference is not intended to take away from the diversity of national legal systems and approaches, and the guidance is to provide a common tool to those working in those diverse systems.
 14. This guidance explains how to implement the Protocol obligations by whatever means are appropriate, and also identifies which obligations should be implemented by binding norms. Those obligations are listed in the Appendix to this Guidance as 'The legislator's checklist'.

Existing laws

15. If states that become Contracting Parties to the Protocol already have in their national law provisions⁸ that relate to the subject matter of the Protocol, they are advised to confirm whether the existing national legislation already implements effectively the provisions of the Protocol. In case of gaps, to be in compliance with the Protocol, they need to amend or repeal those provisions. Earlier legislation that conflicts with self-executing treaty provisions should be repealed. For the sake of clarity and coherence, it may be desirable to consolidate applicable rules.

Minimum set of obligations to be implemented by binding norms

16. Later in this Guidance there is a review of the provisions of the Protocol, which contains an Article-by-Article analysis. The review discusses which provisions it is necessary to implement by binding norms or administrative means. Those provisions for which binding norms are necessary are collected in the appendix to this Guidance as 'The legislator's checklist' for ease of reference. "Necessary" here should not always be understood as indicating a legal requirement.

Checklist for the legislator

17. The Appendix to this Guidance contains 'The legislator's checklist' that focuses on the Protocol provisions that it is appropriate to implement by binding norms and other provisions that may have an impact on national legislation.

⁸ For example, where a state is a Contracting Party to the Convention and subsequently becomes a Contracting Party to the Protocol.

Imposition of a stricter regime at national level

18. Article 3.4 clarifies that nothing in the Protocol prevents Contracting Parties from taking, individually or jointly, more stringent measures in accordance with international law with respect to the prevention, reduction and where practicable elimination of pollution.
19. Article 4.2 builds on this by providing that nothing in the Protocol prevents Contracting Parties from taking stricter measures with regard to dumping of waste or other matter.
20. Both provisions should be read in the light of the recitals to the Protocol, which recognize that it may be desirable for Contracting Parties to take more stringent measures with respect to the prevention and elimination of pollution of the marine environment from dumping at sea.⁹

Amendments to the Protocol

21. There have been three amendments to the Protocol:
 - a. An amendment to include carbon dioxide streams sequestration in sub-seabed geological formations in Annex 1 to the London Protocol (the 2006 amendment) was adopted on 2 November 2006 by Resolution LP.1 (1)¹⁰. That amendment **entered into force in 2006 for all Contracting Parties**.
 - b. An amendment to Article 6 of the London Protocol to allow the export of carbon dioxide streams for the purpose of sequestration in sub-seabed geological formations (the 2009 amendment). The 2009 amendment was adopted on 30 October 2009 by resolution LP.3 (4)¹¹. As of [xxx date] that amendment has not entered into force.
 - c. An amendment to the London Protocol to regulate the placement of matter for ocean fertilization and other marine geoengineering activities (the 2013 amendment) was adopted on 18 October 2013, by resolution LP.4 (8). As of the date of publication that amendment **has not entered into force**.

Article 21.5: Ratification after entry into force of an amendment

⁹ See the fifth recital to the Protocol – "RECOGNIZING that it may be desirable to adopt, on a national or regional level, more stringent measures with respect to prevention and elimination of pollution of the marine environment from dumping at sea than are provided for in international conventions or other types of agreements with a global scope".

¹⁰ See circular LC-LP.1/Circ.5.

¹¹ See circular LC-LP.1/Circ.36.

The general rule

22. Article 21.5 of the Protocol says –
After entry into force of an amendment to this Protocol, any State that becomes a Contracting Party to this Protocol shall become a Contracting Party to this Protocol as amended....
23. So any State that becomes a Contracting Party to the Protocol will need to be aware of which amendments of the Protocol have entered into force¹² because that State will automatically be bound by amendments to the Protocol that have already entered into force.

The exception to the general rule when two thirds of Contracting Parties agree

24. The Second part of Article 21.5 provides for an exception to the rule described above: the rule does not apply if two-thirds of the Contracting Parties present and voting at the Meeting or Special Meeting of Contracting Parties adopting the amendment so agree. The Meeting of Contracting Parties has not so agreed when adopting any of the amendments to date.

Amendments that have not entered into force at the time a state becomes a Contracting Party

25. If an amendment has not entered into force, a State that becomes a Contracting Party should consider whether to accept the amendment at the time of ratification; if that State accepts the amendment, it will enter into force for the State in due course in accordance with Article 21.3¹³ of the Protocol. But if that state does not accept that amendment, it will not be bound by the amendment unless it accepts it at a later date.

Relationship between the revised guidance and other key documents

26. This Guidance replaces the *Guidance on the National Implementation of the 1996 Protocol to the London Convention 1972*, which was adopted in 2001, and will cover all the amendments of the Protocol between 2006 and 2013, providing guidance on how all these amendments may be nationally implemented, although only the 2006 amendment is in force.
27. In 2014 a related manual, often referred to as the "How to do it Manual", was published: *The London Protocol: What it is and How to implement It*. The 'How to do it Manual' gives a practical explanation of the requirements arising under the Protocol, the steps to be taken before ratification/accession, the key elements in implementation of the Protocol and the assistance available for implementation. Readers may find the following sections of the 'How to do it Manual' particularly helpful in conjunction with this guidance:

¹² At the time this Guidance was adopted, only the 2006 Amendment had entered into force.

¹³ "An amendment shall enter into force for the Contracting Parties which have accepted it on the sixtieth day after two thirds of the Contracting Parties shall have deposited an instrument of acceptance of the amendment with the Organization. Thereafter the amendment shall enter into force for any other Contracting Party on the sixtieth day after the date on which that Contracting Party has deposited its instrument of acceptance of the amendment."

- a. section 3.1 and 3.2 on governing bodies and subsidiary bodies respectively (see pages 6 and 7);
 - b. section 4.1 and 4.2 on the benefits and costs of joining the London Protocol (see page 10);
 - c. section 4.4 on examples of national cost recovery programmes to manage dumping at sea under the London Protocol (also see page 10);
 - d. the description of the process to become a Contracting Party to the London Protocol on pages 15 and 16; and
 - e. the discussion of the analysis of costs and benefits of joining the Protocol on page 17.
28. This Guidance builds upon the key elements of implementation in the "How to do it Manual" and emphasizes the legal requirements in implementing and ratifying the Protocol. For Parties or prospective Parties to the Protocol, this document is the more provides more detailed and specific guidance with regard to legal implementation of the Protocol].

Review of the provisions of the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (as amended)

The text below includes the text of the Protocol as amended in 2006, as that amendment has entered into force for all Parties. The 2009 and 2013 amendments, which have not yet entered into force, are discussed at the end of this Guidance. This Guidance does not address-

- a. the Protocol's preamble, which does not contain any legal obligations, but can be used to help interpret the Protocol; and
- b. Articles 14 to 29¹⁴ which do not require implementation by national binding norms.

Article 1: Definitions

Text of Article

- 1 "Convention" means the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as amended.
- 2 "Organization" means the International Maritime Organization.
- 3 "Secretary-General" means the Secretary-General of the Organization.

¹⁴ Readers might wish to note that Article 14 imposes obligations on individual Parties with respect to scientific and technical research; whilst Article 15 contains no obligations the contracting Parties have considered the issue of responsibility and liability and, for the time being decided to take no further action; and under Article 17 individual Parties have obligation to promote the objectives of the Protocol within competent international organisations.

- 4 .1 "Dumping" means:
- .1 any deliberate disposal into the sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea;
 - .2 any deliberate disposal into the sea of vessels, aircraft, platforms or other man-made structures at sea;
 - .3 any storage of wastes or other matter in the sea-bed and the subsoil thereof from vessels, aircraft, platforms or other man-made structures at sea; and
 - .4 any abandonment or toppling at site of platforms or other man-made structures at sea, for the sole purpose of deliberate disposal.
- .2 Dumping does not include:
- .1 the disposal into the sea of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea, operating for the purpose of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft, platforms or other man-made structures;
 - .2 placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Protocol; and
 - .3 notwithstanding paragraph 4.1.4, abandonment in the sea of matter (e.g. cables, pipelines and marine research devices) placed for a purpose other than the mere disposal thereof.
- .3 The disposal or storage of wastes or other matter directly arising from, or related to the exploration, exploitation and associated off-shore processing of seabed mineral resources is not covered by the provisions of this Protocol.
- 5 .1 "Incineration at sea" means the combustion on board a vessel, platform or other man-made structure at sea of wastes or other matter for the purpose of their deliberate disposal by thermal destruction.
- .2 Incineration at sea does not include the incineration of wastes or other matter on board a vessel, platform, or other man-made structure at sea if such wastes or other matter were generated during the normal operation of that vessel, platform or other man-made structure at sea.
- 6 "Vessels and aircraft" means waterborne or airborne craft of any type whatsoever. This expression includes air-cushioned craft and floating craft, whether self-propelled or not.
- 7 "Sea" means all marine waters other than the internal waters of States, as well as the seabed and the subsoil thereof; it does not include sub-seabed repositories accessed only from land.
- 8 "Wastes or other matter" means material and substance of any kind, form or description.

9 "Permit" means permission granted in advance and in accordance with relevant measures adopted pursuant to article 4.1.2 or 8.2.

10 "Pollution" means the introduction, directly or indirectly, by human activity, of wastes or other matter into the sea which results or is likely to result in such deleterious effects as harm to living resources and marine ecosystems, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.

Are there special issues to be considered for implementation?

While these provisions do not establish obligations on parties, they are key to understanding and implementing the obligations that follow. The qualified prohibition on dumping in Article 4 is at the heart of the Protocol's regime, so the definition of dumping in Article 1.4.1 is central to implementation.

"Dumping" covers any deliberate disposal into the sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures (Article 1.4.1.1). Not only does it cover disposal *from* such vessels etc.; it also includes disposal *of* vessels, aircraft, platforms or other man-made structures (Article 1.4.1.2). "Dumping" goes *beyond disposal*: it also includes any *storage of wastes or other matter* in the seabed and the subsoil thereof from vessels, aircraft, platforms or other man-made structures at sea (Article 1.4.1.3); and the *abandonment or toppling* at site of platforms or other man-made structures at sea, but only where this is for the sole purpose of deliberate disposal. Dumping covers only activities "at sea", so it does not cover discharges from land-based sources.

Example application of Article 1.4.1

A ship is in a collision; the impact causes deck cargo to be lost overboard, and oil is spilt as a result of the damage. Neither the loss of the cargo nor the spilling of the oil amounts to dumping for the purposes of Article 1.4.1, as neither was deliberate. If deliberate disposals are subsequently required to avert an emergency situation, then the provisions of Article 8 may apply.

Moreover the three exceptions from that definition are of critical importance.

First, Article 1.4.2.1 excludes disposal into the sea of wastes or other matter incidental to or derived from the normal operations, *inter alia*, of vessels, aircraft, platforms or other man-made structures at sea; but the provision does not except wastes or other matter transported by vessels etc. operating for the purpose of disposal.

Secondly, Article 1.4.2.2 excepts from the definition of "dumping" placement of matter for a purpose other than the mere disposal thereof; to fall within the scope of Article 1.4.2.2, placement must not be contrary to the aims of the Protocol, which are set out in Article 2.

Thirdly, Article 1.4.1.2 3 excepts the abandonment in the sea of matter (e.g., cables, pipelines and marine research devices) placed for a purpose other than mere disposal.

Article 1.4.3 excludes from the scope of the Protocol certain activities that might otherwise fall within the scope of the definition of dumping.

The prohibition on incineration at sea in Article 5 has similar importance to the Article 4 prohibition on dumping, so the definition of incineration at sea in Article 1.5.1 is required to be reflected in implementing laws, and the exclusion of certain activities from that definition in Article 1.5.2 should be considered, although are not necessary if more stringent measures are desired.

Example application of Article 1.4.2

A ship is intentionally sunk at a carefully selected site within a protected area for the purposes of forming an artificial reef providing diving opportunities and enhancing biodiversity. In time it provides a home to sponges, corals and hydroids and provides food and habitat for a number of sea creatures. The sinking does not amount to dumping, because it is "placement of matter for a purpose other than the mere disposal thereof" within the meaning of Article 1.4.2 and the placement, which enhanced biodiversity, is not contrary to the aims of the Protocol.*

** The voluntary Guidelines for the Placement of Artificial Reefs were taken into account to ensure that the placement of the vessel did not result in marine pollution that would be contrary to the aims of the Protocol.*

The definition of "wastes and other matter" should be read in conjunction with Article 4 and

Example application of Article 1.4.2

A pipeline is laid on the seabed for transporting material from land directly to the sea. The laying of the pipeline does not amount to dumping because it is placement for a purpose other than the mere disposal thereof.

Annex 1, which lists the wastes that are not subject to the Protocol's prohibition on dumping and so may be considered for dumping.

The definition of sea in Article 1.7 expressly excludes internal waters, although Article 7 provides for the Protocol to relate to internal waters to the extent provided for in Article 7.2 and 3.

Whilst the "sea" includes the seabed and subsoil, it does not include sub-seabed repositories accessed only from land, and so any binding norms adopted under Article 7 need not apply to land-based discharges.

Article 1.10 provides that pollution means the introduction, directly or indirectly, by human activity, of wastes or other matter into the sea which results or is likely to result in: harm to living resources and marine ecosystems; hazards to human health; hindrance to marine activities, including fishing; impairment of quality for use; and reduction of amenities. The definition of pollution is particularly important for the obligations set out in Article 2, which specifies the objectives of the Protocol, and paragraph 2 of Annex I, which provides, inter alia,

that certain Annex 1 wastes may be considered for dumping provided that material capable of creating floating debris or otherwise contributing to pollution of the marine environment has been removed to the maximum extent.

Implement by binding norms?

Article 1 defines terms that are used in other Articles. Where it is necessary to implement those latter Articles by binding norms, it will also be necessary to reflect these definitions in the corresponding binding norms.

Other information

Article 1.2 provides that "Organization" means the International Maritime Organization (IMO). Many of the provisions of the Protocol that relate to the IMO are not discussed in this Guidance, because the Guidance relates principally to provisions that require implementation at the national level, and so does not discuss obligations that relate to governance and institutional issues.

To assist parties seeking to apply the 'placement' exemption from the definition of 'dumping', the London Convention and London Protocol/United Nations Environment Programme Guidelines for the Placement of Artificial Reefs¹⁵ was published in 2009 in order to assist Contracting Parties to assess artificial reef placement proposals on the basis of scientifically and environmentally sound criteria and to develop an appropriate regulatory framework.

Article 2: Objectives

Text of Article

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.

Are there special issues to be considered for implementation?

This Article sets out an overarching obligation for Parties to protect and preserve the marine environment from all sources of pollution. This echoes Article 194.1 of the United Nations Convention on the Law of the Sea.¹⁶

The Article also contains an obligation to take effective measures to prevent, reduce and where practicable eliminate pollution caused by dumping or incineration at sea. A Party can expect that measures adopted to implement other provisions of the Protocol would help meet this general obligation, particularly as it is linked to Contracting Parties' scientific, technical and economic capabilities¹⁷.

¹⁵ See http://www.imo.org/blast/blastDataHelper.asp?data_id=25688&filename=London_conv_ention_UNEP_Low-res-ArtificialReefs.pdf

¹⁶ It provides: "States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source...".

¹⁷ The seventh preambular recital recognises "the interests and capacities of developing States and in particular small island developing States". [the reason is that this is a footnote to something other than a preambular recital, so just for greater clarity for non-lawyers].

Article 2 recognizes that it will not always be practicable to eliminate pollution caused by dumping or incineration at sea, but where it is practicable Contracting Parties should take effective measures to achieve that outcome. The eighth recital to the Protocol says that the Contracting Parties are convinced that, inter alia, action to prevent, reduce and where practicable eliminate pollution of the sea caused by dumping must be taken to protect and preserve the marine environment and to manage human activities in such a manner that the marine ecosystem will continue to sustain the legitimate uses of the sea and will continue to meet the needs of present and future generations.

Action to implement Article 2 is to be taken both individually and collectively and Contracting Parties are to harmonise their policies where appropriate.

The value of further joint and individual action is recognised in the third recital to the Protocol, which notes the contribution "by complementary regional and national instruments which aim to protect the marine environment and which take account of specific circumstances and needs of those regions and States".

It is also worth noting that a key definition in the Protocol—dumping—has exclusions from its application outlined in Article 1. One of these exclusions states that dumping does not include placement of matter for a purpose other than the mere disposal thereof, "provided that such placement is not contrary to the aims of this Protocol". The objectives or "aims" of the Protocol as set out in Article 2 can assist in such interpretation, and thus may be reflected in implementing legislation in some way.

Implement by binding norms?

Whilst it may not be essential to use binding norms to implement Article 2, the language of the Article may be reflected in national law so as to guide Contracting Parties' authorities in the implementation and interpretation of the Protocol.

The overarching obligation to protect and preserve the marine environment will be implemented by Parties not only through legislation implementing the London Protocol, but also through legislation controlling other marine pollution issues, as well as a wide range of other actions.

Article 3: General Obligations

Text of Article

1 In implementing this Protocol, Contracting Parties shall apply a precautionary approach to environmental protection from dumping of wastes or other matter whereby appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects.

2 Taking into account the approach that the polluter should, in principle, bear the cost of pollution, each Contracting Party shall endeavour to promote practices whereby those it has authorized to engage in dumping or incineration at sea bear the cost of meeting the pollution prevention and control requirements for the authorized activities, having due regard to the public interest.

3 In implementing the provisions of this Protocol, Contracting Parties shall act so as not to transfer, directly or indirectly, damage or likelihood of damage from one part of the environment to another or transform one type of pollution into another.

4 No provision of this Protocol shall be interpreted as preventing Contracting Parties from taking, individually or jointly, more stringent measures in accordance with international law with respect to the prevention, reduction and where practicable elimination of pollution.

Are there special issues to be considered for implementation?

The Contracting Parties to the London Protocol noted the achievements within the framework of the London Convention, including an evolution towards precaution and prevention¹⁸. Article 3.1 to 3.3 recognises this, enshrining the precautionary and polluter pays approach, and introducing the idea of non-transference of environmental harm from one part of the environment to another, or transformation of one type of pollution into another. These general obligations provide an interpretative overlay to the implementation of Protocol obligations.

The precautionary approach

By virtue of Article 3.1, Contracting Parties must apply a precautionary approach to environmental protection from dumping of wastes or other matter in implementing the Protocol, whereby appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm. There does not have to be conclusive evidence of a causal relationship between inputs and their effects to trigger the obligation to apply a precautionary approach. Although Contracting Parties will have, in practice, discretion to consider what evidence they require before they consider they have reason to believe that the introduction of wastes or other matter is likely to cause harm, appropriate preventative measures are to be taken even when there is an absence of conclusive scientific proof of harm.

Reflecting the application of a "precautionary approach," the Protocol adopts a reverse list approach, so that all dumping is prohibited except for the wastes and other matter listed in Annex 1; incineration of wastes at sea is prohibited; and export of wastes for the purpose of dumping or incineration at sea is prohibited.

Annex 2 to the Protocol contains practical requirements with respect to the assessment of wastes or other matter that may be considered for dumping. Annex 2 contains a number of specific provisions that implement the precautionary approach. For example, if analysis under paragraph 14 of that Annex reveals that adequate information is not available to determine the likely effects of a disposal option then that option should not be considered further.

The polluter pays approach

A number of multilateral environmental agreements and international policy documents reflect the idea that the polluter should pay¹⁹, but the Protocol has its own particular formulation of the approach.

Article 3.2 of the Protocol requires Contracting Parties to endeavour to promote practices under which persons authorised to engage in dumping or incineration at sea bear the cost of meeting the pollution prevention and control requirements, taking into account the approach that the polluter should, in principle, bear the cost of pollution ("the polluter pays approach"). The primary obligation is qualified: in implementing the obligation Contracting Parties must have due regard to the public interest and take into account the polluter pays approach. The

¹⁸ See the second preambular recital to the Protocol.

"NOTING in this regard the achievements within the framework of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and especially the evolution towards approaches based on precaution and prevention".

¹⁹ Some agreements and policy documents refer to the polluter pays *principle*.

policy behind the polluter pays approach is this: without the application of the approach there would be an economic incentive to dump at sea leaving society to bear the costs of polluting activities.

Fees and charges could be means to implement the polluter pays approach, although it should be noted that the "public interest" qualification can mean that fees should not be charged beyond the cost of meeting the pollution prevention and control requirements and what the market can bear.

Example of Article 3.2 Implementation

Under a Contracting Party's permitting regime, fees can be charged on various bases to be consistent with the polluter pays approach (Article 3.2). For example, fees could be assessed with reference to the amount of material to be dumped (e.g. a certain amount per 100 tonnes of material disposed), or with reference to the relative costs associated with administering ocean dumping laws including pre-disposal permit application assessments, administration, and post-disposal monitoring costs (e.g. a certain amount per hour spent assessing a permit application).

Example of Article 3.2 Implementation

In order to implement the polluter pays approach a permit holder could be required, as a condition of their permit or permit application, to pay for any sampling, analysis and material management required to enable them to meet the pollution prevention requirements set in the permit.

Contracting Parties may wish to consider levying fees and charges to deliver cost neutrality, so that the entire regulatory regime is financed by applicants for, and holders of, permits, which would be consistent with the polluter pays approach. Examples of national cost recovery programmes to manage dumping at sea under the Protocol may be found in the 'How to do it Manual'²⁰.

Non-transference of damage

Article 3.3 provides that in the implementation of the Protocol Contracting Parties are obliged to act so as not to transfer, directly or indirectly, damage or likelihood of damage from one part of the environment to another or transform one type of pollution into another.

The concept of non-transference can be found elsewhere in international environmental instruments²¹. The concept is intended to avoid a perverse outcome from environmental protection measures: the transference of damage or risk to another environmental medium.

²⁰ See pages 10 to 12 of the 'How to do it Manual'.

²¹ See, for example the duty not to transfer damage or hazards or transform one type of pollution into another as set out in Article 195 of the United Nations Convention on the Law of the Sea – In taking measures to prevent, reduce and control pollution of the marine environment, States shall act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another.

A variant appears in principle 14 of the Rio Declaration on Environment and Development – States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.

This is particularly important when considering national approaches to managing wastes when considering permitting applications and is reflected in a number of the provisions of Annex 2.

More stringent measures

Article 3.4 is dealt with elsewhere: see paragraphs 18 to 20.

Implement by binding norms?

Whilst the **precautionary approach, the polluter pays approach and non-transference** must be implemented by the Contracting Parties under the Protocol, it is not strictly necessary to implement them expressly in national implementing legislation. Nevertheless, Contracting Parties' national implementation authorities²² may find it helpful if national legislation addresses the precautionary approach, the polluter pays approach, and the obligation to avoid transferring damage between types of pollution or parts of the environment. Existing legislation should be removed and, if necessary, amended if inconsistent with Article 3.1 to 3.3.

More stringent measures in Article 3.4, if they are desired, may need to be enacted by binding norms. This Guidance identifies obligations that are necessary to implement by legislative or administrative means. Where a Contracting Party implements more stringent measures than those set out in an Article, it may be necessary or appropriate to implement those more stringent measures by binding norms.

Article 4: Dumping of Wastes or Other Matter

Text of Article

- 4.1 .1 Contracting Parties shall prohibit the dumping of any wastes or other matter with the exception of those listed in Annex 1.**
- .2 The dumping of wastes or other matter listed in Annex 1 shall require a permit. Contracting Parties shall adopt administrative or legislative measures to ensure that issuance of permits and permit conditions comply with provisions of Annex 2. Particular attention shall be paid to opportunities to avoid dumping in favour of environmentally preferable alternatives.**
- 2. No provision of this Protocol shall be interpreted as preventing a Contracting Party from prohibiting, insofar as that Contracting Party is concerned, the dumping of wastes or other matter mentioned in Annex 1. That Contracting Party shall notify the Organization of such measures.**

Are there special issues to be considered for implementation?

Arguably the most important provisions in the Protocol, Article 4.1.1 provides for a general prohibition of the dumping of wastes or other matter, with limited exceptions²³. Given the breadth of the definition of "dumping" and "wastes or other matter", Article 4.1.1 significantly limits the extent to which wastes and other matter may be deliberately disposed of at sea.

²² National implementing authorities are those designated in accordance with **Article 9.1**.

²³ Article 8.1 provides that the prohibitions in Articles 4.1 and 5 shall not apply in certain exceptional circumstances, and Article 8.2 allows Parties to issue permits as an exception to articles 4.1 and 5 in emergencies as defined in that article.

Dumping of wastes or other matter listed in Annex 1 is expressly excepted from the Article 4.1.1 prohibition; the dumping of such wastes or other matter is subject to an Article 4.1.2 permit. The issuance of permits and permit conditions must comply with the provisions of Annex 2 of the Protocol. The annex will be discussed in more depth later in this Guidance; but it is worth stressing here that paragraph 1 of that annex expressly provides that the acceptance of dumping under certain circumstances shall not remove the obligations to make further attempts to reduce the necessity for dumping. The permitting of dumping is also subject to the requirement to pay particular attention to opportunities to avoid dumping in favour of environmentally preferable alternatives.

The approach enshrined by Article 4.1 is often referred to as "reverse listing". The Protocol does not list waste and other matter subject to a prohibition on dumping; rather it provides that *all* dumping is prohibited, *except* where waste and other matter to be dumped is expressly listed in Annex 1.

When implementing Article 4.1 it is necessary to bear in mind the exceptions provided for in Article 8: the *force majeure* exception in Article 8.1 and the emergency permitting exception in Article 8.2.

Article 4.2 expressly recognizes that Contracting Parties may go beyond the requirements of the Protocol by prohibiting the dumping of waste and other matter listed in Annex 1. See paragraphs 18 to 20 above on the imposition of a more restrictive regime than that expressly provided for by the Protocol.

Implement by binding norms?

Prohibition

Article 4.1 requires Contracting Parties to *prohibit* the dumping of any wastes or other matter with the exception of those listed in Annex 1. This prohibition is the central feature of the Protocol that serves to prevent dumping and also an essential reference point that serves as foundation for many other Protocol provisions: for example Articles 7 (internal waters), 8 (exceptions), 9 (issuance of permits), and 10 (application and enforcement) are framed with reference to the Article 4 prohibition.

Moreover, as noted below, Article 10.2 of the Protocol requires each Contracting Party to take appropriate measures in accordance with international law to prevent and if necessary *punish* acts contrary to the provisions of the Protocol.

It is necessary for prohibition, prevention, and punishment to be done by binding norms. In order to "prohibit" something, a Contracting Party would formally forbid the activity under the state's legal system; and in order to "punish" an act, a Contracting Party would impose a penalty or sanction upon someone for an offence against such a law. In either case, one would expect the act prohibited or to be punished under binding norms, which might well include provisions – such as authority for inspections and related powers of search and seizure – necessary to enforce the legislation.

Permitting

Article 4.1.2 should be read in conjunction with Article 1.9, which defines "permit" to mean permission granted in advance and in accordance with relevant measures adopted pursuant to Article 4.1.2 or 8.2.

A permit granted pursuant to Article 4.1.2 allows dumping of waste and other matter listed in Annex 1. To render this provision effective, it is required that a failure to apply for and to obtain a permit under Article 4.1.2 will trigger legal consequences; otherwise the provision would be pointless. The inference to be drawn is that given the prohibition in Article 4 on dumping, which is required to have a basis in binding norms, any derogation from that prohibition through a permitting system needs to be implemented also through binding norms.

Example of application of Article 4.2

A Contracting Party's policy is to completely ban dumping of sewage sludge and organic material of natural origin in areas within which it is entitled to exercise jurisdiction in accordance with international law, notwithstanding the fact that such wastes and other matter may be considered for dumping by virtue of Article 4.1.1 and 4.1.2 and Annex 1. The Contracting Party implements its policy by binding norms and notifies the International Maritime Organisation of the measures. Article 4.2 expressly provides that no provision of the Protocol shall be interpreted as preventing such a ban.

Example of application of Article 4.1.2

A ship leaves a Contracting Party with a cargo that partly comprises corn. Due to faulty storage the corn is saturated by ingress of water and it becomes apparent to the ship's master that the corn is no longer suitable for animal or human consumption and is now useless. In this non-emergency situation, and following an assessment of possible alternatives to disposal at sea and the potential effects of such disposal, the ship's master recommends to the owner that the corn can be disposed of in the high seas with minimal or perhaps no risk to the human health or the environment at minimal incremental costs. The owner agrees with the recommendation. Before the spoilt cargo is disposed at sea, however, it is necessary for the disposal to be authorized with an Article 4.1.2 permit.

*Were this an emergency situation posing an unacceptable risk to human health, safety and the marine environment, an emergency permit under **Article 8** could be considered following a similar assessment of alternatives to disposal and the likely effects of disposal on the marine environment.*

Other information

Paragraph 1 of Annex 1 provides that when considering the reverse list in Annex 1 for proposed dumping, Contracting Parties must also be mindful of the objectives and general obligations set out in Articles 2 and 3.

If a Contracting Party goes beyond the requirements of the Protocol to prohibit dumping of wastes or other matter mentioned in Annex 1, that Contracting Party is obligated to notify the IMO under Article 4.2. That is one of a number of notification and reporting obligations provided for in the Protocol.

The Revised Guidance on the Management of Spoilt Cargoes²⁴ relates, *inter alia*, to legal issues raised with respect to the permitting of dumping of spoilt cargoes. See, in particular, paragraphs 18-19 on Article 4 and spoilt cargoes.

Article 5: Incineration at Sea

Text of Article

Contracting Parties shall prohibit incineration at sea of wastes or other matter.

Are there special issues to be considered for implementation?

Article 5 is another key prohibition in the Protocol. Unlike Article 4.1, Article 5 does not provide for the permitting of Annex 1 wastes and other matter for incineration; Contracting Parties may only issue an emergency permit under Article 8.2.

Article 8.1 also provides for a force majeure exception from the prohibition in Article 5.

Example of application of Article 5

A vessel is loaded with garbage collected on land. The garbage is disposed of by incineration of that garbage on the vessel whilst it is at sea. That incineration would violate the prohibition in Article 5.

There are exclusions from the definition of incineration at sea in Article 1.5.2 when wastes or other matter are incinerated on board a vessel, platform, or other man-made structure at sea and the wastes and other matter were generated during the normal operation of that vessel, platform or other man-made structure at sea. If the Party is also a Contracting Party to the International Convention for the Prevention of Pollution from Ships, 1973/1978, then such activity would be regulated under Annex 6 of that instrument.

Implement by binding norms?

Article 5 contains one of the key prohibitions in the Protocol; it requires Contracting Parties to *prohibit* incineration at sea of wastes and other matter. (The other key prohibition is set out in Article 4.1.)

²⁴ See <http://www.imo.org/en/OurWork/Environment/LCLP/Documents/58.pdf>

Like Article 4.1, Article 5 should be read in conjunction with Article 10.2, which requires each Contracting Party to take appropriate measures to prevent and if necessary *punish* acts contrary to the provisions of the Protocol.

It is necessary for the Article 5 prohibition, like the Article 4.1 prohibition, to be implemented by binding norms for the same reasons.

In order to "prohibit" something, a Contracting Party would formally forbid something by a law; and in order to "punish" an act, a Contracting Party would inflict a penalty or sanction upon someone for an offence against a law. In either case, one would expect the act prohibited or to be punished to be set out in national law introduced by binding norms; and that legislation might well include provisions – such as authority for inspections and related powers of search and seizure – necessary to enforce the legislation.

Article 6: Export of Wastes or Other Matter

Text of Article

Contracting Parties shall not allow the export of wastes or other matter to other countries for dumping or incineration at sea.

Are there special issues to be considered for implementation?

This Article is intended to preclude a possible way of evading the prohibitions in Articles 4 and 5. Without the Article 6 prohibition, wastes and other matter could be exported to Parties or non-Parties for dumping or incineration at sea without a breach of a Contracting Party's domestic measures implementing the Protocol.

To implement the Protocol, it may be worth considering whether to adopt a prohibition on import in addition to the prohibition on export of wastes and other matter for dumping or incineration at sea. Whilst an import prohibition is not required in order to implement the Protocol, such a prohibition may enable a Contracting Party to avoid serving as a state of transit or a state of destination.

Example of Article 6 Implementation

A Contracting Party adopts a prohibition on the export of both hazardous and non-hazardous waste for dumping. To reinforce and complement the enforcement by other Parties of their export bans, the Contracting Party also adopts an import ban.

In October 2009, the Contracting Parties adopted an amendment, which is not yet in force, to allow for the export of carbon dioxide streams for storage in sub-seabed geological formations²⁵. It may also be valuable to consider whether it would be worthwhile when implementing Article 6 also to implement the 2009 Amendment, which, when it enters into force, will amend Article 6.

²⁵ See page 49 below.

Implement by binding norms?

Article 6 of the Protocol says Contracting Parties shall *not allow* the export of wastes or other matter to other countries for dumping or incineration at sea. "Not allowing" an export is very similar to "prohibiting" that export or otherwise preventing it, since it would be difficult to conceive of a legal system where this could be "not allowed" without binding norms. It is also natural to assume that declining to allow exports will have legal consequences for exporters, particularly when linked with the Article 10 obligation to punish acts contrary to the Protocol.

Article 7: Internal Waters

Text of Article

1 Notwithstanding any other provision of this Protocol, this Protocol shall relate to internal waters only to the extent provided for in paragraphs 2 and 3.

2 Each Contracting Party shall at its discretion either apply the provisions of this Protocol or adopt other effective permitting and regulatory measures to control the deliberate disposal of wastes or other matter in marine internal waters where such disposal would be "dumping" or "incineration at sea" within the meaning of article 1, if conducted at sea.

3 Each Contracting Party should provide the Organization with information on legislation and institutional mechanisms regarding implementation, compliance and enforcement in marine internal waters. Contracting Parties should also use their best efforts to provide on a voluntary basis summary reports on the type and nature of the materials dumped in marine internal waters.

Are there special issues to be considered for implementation?

"Internal waters" are waters landward of the baseline from which the Territorial Sea is measured²⁶.

Article 1.7 of the Protocol excludes internal waters from the definition of "sea". Article 7.1 builds on that exclusion, by expressly providing that the Protocol relates only to internal waters to the extent provided for in paragraphs 2 and 3 of the Article.

By virtue of Article 7.2, Contracting Parties must choose one of two paths: either a Party applies the provisions of the Protocol to marine internal waters, or it adopts other effective permitting and regulatory measures to control the deliberate disposal of wastes or other matter in marine internal waters. A Contracting Party may find the first option attractive if it wishes to harmonize its permitting and regulatory measures in its internal waters with the measures that the Party applies at sea. Article 7.3, which is non-binding, provides that each Contracting Party should provide the IMO with information with respect to regulation of its marine internal waters, and to use best efforts to provide, on a voluntary basis, summary reports on the type and nature of the material dumped in marine internal waters.

Implement by binding norms?

It is clear that the implementation of 7.2 must be based on binding laws, although a Party has the option of choosing whether to do this by applying the provisions of the Protocol (and related legislative implementation measures) or other effective permitting and regulatory measures.

²⁶ See Article 8 of the 1982 United Nations Convention on the Law of the Sea.

Article 8 Exceptions

Text of Article

1 The provisions of articles 4.1 and 5 shall not apply when it is necessary to secure the safety of human life or of vessels, aircraft, platforms or other man-made structures at sea in cases of *force majeure* caused by stress of weather, or in any case which constitutes a danger to human life or a real threat to vessels, aircraft, platforms or other man-made structures at sea, if dumping or incineration at sea appears to be the only way of averting the threat and if there is every probability that the damage consequent upon such dumping or incineration at sea will be less than would otherwise occur. Such dumping or incineration at sea shall be conducted so as to minimize the likelihood of damage to human or marine life and shall be reported forthwith to the Organization.

2 A Contracting Party may issue a permit as an exception to articles 4.1 and 5, in emergencies posing an unacceptable threat to human health, safety, or the marine environment and admitting of no other feasible solution. Before doing so the Contracting Party shall consult any other country or countries that are likely to be affected and the Organization which, after consulting other Contracting Parties, and competent international organizations as appropriate, shall, in accordance with article 18.1.6 promptly recommend to the Contracting Party the most appropriate procedures to adopt. The Contracting Party shall follow these recommendations to the maximum extent feasible consistent with the time within which action must be taken and with the general obligation to avoid damage to the marine environment and shall inform the Organization of the action it takes. The Contracting Parties pledge themselves to assist one another in such situations.

3 Any Contracting Party may waive its rights under paragraph 2 at the time of, or subsequent to ratification of, or accession to this Protocol.

Are there special issues to be considered for implementation?

Article 8 provides for two exceptions to the prohibitions in Articles 4.1 and 5: Under Article 8.1, the prohibition of the dumping and incineration at sea shall not apply in the case of *force majeure*. Furthermore, by virtue of Article 8.2, a Contracting Party may issue a permit for the disposal of wastes or other matter at sea in emergencies posing an unacceptable threat to human health, safety or the marine environment and admitting of no other feasible solution. It should be noted that Article 8.1 and Article 8.2 may allow the dumping of waste or other matter other than the waste or other matter listed in Annex 1. In the exceptional circumstances specified in Article 8 dumping of waste or other matter that could not otherwise be dumped may become temporarily lawful without infringing the Protocol.

Both paragraphs 1 and 2 contain a number of safeguards.

The Article 8.1 *force majeure* exception only applies

- when it is necessary in order to secure the safety of human life or of vessels, aircraft, platforms or other man-made structures at sea, as provided in the paragraph;
- in cases of *force majeure* caused by stress of weather, or in any case which constitutes a danger to human life or a real threat to vessels, aircraft, platforms or other man-made structures at sea, as provided for in the paragraph; and

- if dumping or incineration at sea appears to be the only way of averting the threat and if there is every probability that the damage consequent upon such dumping or incineration at sea will be less than would otherwise occur.

If the *force majeure* exception applies, there is no need for a permit.

Any dumping or incineration at sea under Article 8.1 must be done in such a way as would minimise the likelihood of damage to human or marine life. So, for example, if it were necessary to release a cargo under Article 8.1 conditions, it may be necessary to consider releasing only part of the cargo in order to minimise damage.

Under Article 8.2 an **emergency permit** may be issued only in exceptional circumstances, namely:

Example of application of Article 8.1

There is a major leak of flammable gas, which is part of the cargo of a ship. The leak constitutes a danger to human life (i.e. a threat to the safety of the crew).

*In the circumstances, the master of the ship determines that dumping some of the cargo appears to be the only way of averting the threat, on the basis that the probability is that the consequent damage of such dumping would be less than the danger to human life. In order to minimise the damage to marine life in a case of force majeure as required by **Article 8.1**, only the parts of the cargo that create the threat and therefore the case of force majeure (i.e. the flammable gases) are dumped.*

- in emergencies posing an unacceptable threat to human health, safety or the marine environment; and
- where the emergency admits of no other feasible solution.
In the circumstances described in Article 8.2, the Protocol envisions that there will be time to consult, so that provision engages the international community in a way that Article 8.1 does not.

So before issuing an emergency permit, the Contracting Party must –

- consult any other country or countries that are likely to be affected, regardless of whether they are Contracting Parties to the Protocol, and the IMO; and
- follow any recommendations made by the IMO in accordance with Article 18.1.6 to the maximum extent feasible consistent with the time within which action must be taken and with the general obligation to avoid damage to the marine environment.

Article 8.2 engages the international community: this is reflected not only in the role expressly provided for the IMO, but also in the general pledge Contracting Parties make to assist each other in the situations provided for.

Example of application of Article 8.2

*A cargo ship sustains severe damage in a collision off the coast of a Contracting Party in a crowded shipping lane. The damaged ship remains afloat without power and poses an unacceptable threat to navigational safety. The ship is too badly damaged to withstand a long trip being towed to shore. The authorities of the Contracting Party rule out the possibility of salvaging the ship, and so seek to issue a permit under **Article 8.2** to sink the ship at a site a very short distance away where it can be disposed of without impairing navigation, and with minimum harm to fishing and other interests. Before issuing the permit, the authorities of the Contracting Party consult with other neighbouring Contracting Parties, who offer their expertise to help to identify the disposal site and permit conditions that will mitigate the risks posed by the disposal. As a result of the consultations, permit conditions are included requiring cleaning the ship in place and to the extent possible given the urgency of the situation.*

Implement by binding norms?

An Article 8.1 *force majeure* exception, or a permit pursuant to Article 8.2 will be an exception to an Article 4.1 or 5 prohibition. It is necessary to implement Articles 4.1 and 5 by binding norms, and it follows that it is also necessary to provide for exceptions by binding norms.

Other information

There is further and extensive information on implementation of and compliance with Article 8 in the "Procedures and Criteria for Determining and Addressing Emergency Situations as referred to in Articles 8 and 18.1.6 of the London Protocol", see <http://www.imo.org/en/OurWork/Environment/LCLP/Reporting/Documents/Emergency%20procedures.pdf>

The procedures and criteria also relate to the reporting required under Article 8.1 and 8.2. The Revised Guidance on the Management of Spoilt Cargoes²⁷ relates, inter alia, to legal issues raised with respect to the permitting of dumping of spoilt cargoes. See, in particular, paragraphs 20-23 on Article 8 and spoilt cargoes.

²⁷ See: <http://www.imo.org/en/OurWork/Environment/LCLP/Documents/58.pdf>

Article 9: Issuance of Permits and Reporting

Text of Article

- 1 Each Contracting Party shall designate an appropriate authority or authorities to:**
 - .1 issue permits in accordance with this Protocol;**
 - .2 keep records of the nature and quantities of all wastes or other matter for which dumping permits have been issued and where practicable the quantities actually dumped and the location, time and method of dumping; and**
 - .3 monitor individually, or in collaboration with other Contracting Parties and competent international organizations, the condition of the sea for the purposes of this Protocol.**

- 2 The appropriate authority or authorities of a Contracting Party shall issue permits in accordance with this Protocol in respect of wastes or other matter intended for dumping or, as provided for in article 8.2, incineration at sea:**
 - .1 loaded in its territory; and**
 - .2 loaded onto a vessel or aircraft registered in its territory or flying its flag, when the loading occurs in the territory of a State not a Contracting Party to this Protocol.**

- 3 In issuing permits, the appropriate authority or authorities shall comply with the requirements of article 4, together with such additional criteria, measures and requirements as they may consider relevant.**

- 4 Each Contracting Party, directly or through a secretariat established under a regional agreement, shall report to the Organization and where appropriate to other Contracting Parties:**
 - .1 the information specified in paragraphs 1.2 and 1.3;**
 - .2 the administrative and legislative measures taken to implement the provisions of this Protocol, including a summary of enforcement measures; and**
 - .3 the effectiveness of the measures referred to in paragraph 4.2 and any problems encountered in their application.**

The information referred to in paragraphs 1.2 and 1.3 shall be submitted on an annual basis. The information referred to in paragraphs 4.2 and 4.3 shall be submitted on a regular basis.

- 5 Reports submitted under paragraphs 4.2 and 4.3 shall be evaluated by an appropriate subsidiary body as determined by the Meeting of Contracting Parties. This body will report its conclusions to an appropriate Meeting or Special Meeting of Contracting Parties.**

Are there special issues to be considered for implementation?

Contracting Parties are obliged to designate an appropriate authority or authorities, that have permitting, record keeping and monitoring functions as provided for by Article 9.1.

Permitting functions are exercised with respect to dumping or, in the very limited emergency circumstances described in Article 8.2. Permits are to be issued by the appropriate authority when the wastes or other matter to be dumped or incinerated are loaded in its territory; and also when loaded onto a vessel or aircraft registered in the territory or flying the flag of a Contracting Party, when the loading occurs in the territory of a State that is not a Contracting Party.

The appropriate authorities must comply with the requirements of Article 4 when issuing permits²⁸. Article 4 requires ensuring that permits comply with Annex 2, which is discussed below. The authorities may also introduce additional criteria, measures and requirements.

The appropriate authorities must also keep records of the nature and quantities of the wastes or other matter for which dumping permits have been issued, as set out in Article 9.1.2, and under Article 9.1.3, monitor the condition of the sea for the purposes of the Protocol.

Reports must be submitted by Contracting Parties to the IMO directly or through a secretariat established under a regional agreement, and include records relating to wastes or other matter as provided for in Article 9.1.2 and information about monitoring carried out pursuant to Article 9.1.3²⁹. Such reports must be submitted annually.

Reports required under Article 9.4.2 and 9.4.3 on the administrative and legislative measures taken to implement the provisions of the Protocol, including a summary of enforcement measures, as well as the effectiveness of such measures, are to be submitted on a regular basis. The Meeting of Contracting Parties decides when these need to be submitted, and has selected the Compliance Group as the subsidiary body that will evaluate such reports.

Implement by binding norms?

As we have seen, it is necessary to implement Article 4.1.2, which provides for the permitting of the dumping of wastes or other matter listed in Annex 1.

Article 9 contains a number of obligations relating to reporting on permitting activities. Those obligations are inherent to the permitting regime, so it would be appropriate to implement them by binding norms where this is necessary to obtain the relevant information from permit holders. The act of gathering the required information and submitting it to IMO is an administrative act.

²⁸ Examples of permits issued for various types of wastes are available in the "Low Technology, Low Cost Compliance Monitoring Guidance" (2017).

²⁹ The "Low Technology, Low Cost Field Monitoring Guidance" (2016) provides advice about establishing simple monitoring programs that can evolve and become more complex over time.

Moreover as it is necessary to provide for a permitting regime by binding norms, it follows that binding norms will be required to provide an authority with the power to grant or refuse permits and to give legal force to that authority's decisions.

Other information

Example of Article 9 Implementation

A Contracting Party introduces a permitting system for the purposes of implementing Article 9 by enacting a single, coherent law, which provides for an application form and requires a waste assessment in accordance with an assessment framework that mirrors Annex 2. A permitting authority is designated, and has a formal, regionally based consultation network, which includes regional authorities as appropriate and a mechanism to solicit and receive submissions from the public. Under the system, permits may be issued for individuals or companies for single sites and in some cases for multi-site use. The designated authority may issue emergency permits where necessary. The law requires that fees be charged for the review of applications and for disposal; the latter are used to cover the cost of disposal site monitoring.

The practical arrangements for reporting are set out on the IMO website at <http://www.imo.org/en/OurWork/Environment/LCLP/Reporting/Pages/default.aspx>.

Under Article 9.4 of the Protocol there must be an annual report on all permits issued and an annual report on monitoring activities that have been undertaken pursuant to Article 9.1.3. Contracting Parties should register for an IMO online account, and use this to submit reports electronically using the Global Integrated Shipping Information System (GISIS) at <https://gisis.imo.org/Public/Default.aspx>³⁰. Alternatively, the Secretariat can provide a form that can be used for reporting.

The IMO Secretariat publishes compilations of these reports on an annual basis. See <https://webaccounts.imo.org/Common/WebLogin.aspx?App=IMODOCS&ReturnUrl=https%3A%2F%2Fdocs.imo.org%2F>

The Compliance Group has stressed that annual reporting is a legal obligation under the Protocol. To help promote Parties' compliance, the Compliance Group has prepared a short document summarizing reporting obligations under the Protocol³¹.

³⁰ LC-LP.1/Circ.74, 16 November 2015 titled "Announcement of the introduction of an online reporting system for annual reports of dumping of wastes and other matter at sea" provides detailed instructions about accessing and using the online reporting tools in GISIS.

³¹ LP-CG 3/7, 26 August 2010 titled "Summary of all Reporting Requirements under the Protocol".

Article 10: Application and Enforcement

Text of Article

1 Each Contracting Party shall apply the measures required to implement this Protocol to all:

- .1 vessels and aircraft registered in its territory or flying its flag;**
- .2 vessels and aircraft loading in its territory the wastes or other matter which are to be dumped or incinerated at sea; and**
- .3 vessels, aircraft and platforms or other man-made structures believed to be engaged in dumping or incineration at sea in areas within which it is entitled to exercise jurisdiction in accordance with international law.**

2 Each Contracting Party shall take appropriate measures in accordance with international law to prevent and if necessary punish acts contrary to the provisions of this Protocol.

3 Contracting Parties agree to cooperate in the development of procedures for the effective application of this Protocol in areas beyond the jurisdiction of any State, including procedures for the reporting of vessels and aircraft observed dumping or incinerating at sea in contravention of this Protocol.

4 This Protocol shall not apply to those vessels and aircraft entitled to sovereign immunity under international law. However, each Contracting Party shall ensure by the adoption of appropriate measures that such vessels and aircraft owned or operated by it act in a manner consistent with the object and purpose of this Protocol and shall inform the Organization accordingly.

5 A State may, at the time it expresses its consent to be bound by this Protocol, or at any time thereafter, declare that it shall apply the provisions of this Protocol to its vessels and aircraft referred to in paragraph 4, recognising that only that State may enforce those provisions against such vessels and aircraft.

Are there special issues to be considered for implementation?

By virtue of Article 10.1, the Protocol is to be applied to

- vessels and aircraft registered in a Contracting Party's territory or flying its flag, which creates responsibility for flag states;
- vessels and aircraft loading wastes or other matter in its territory to be dumped or incinerated at sea, which creates a responsibility for port states; and
- vessels, aircraft and platforms or other manmade structures believed to be engaged in dumping in waters under its jurisdiction, which creates a responsibility for coastal states.

Article 10.3 records the agreement of Contracting Parties to cooperate in the development of procedures for the effective application of the Protocol in areas beyond the jurisdiction of any State.

Under Article 10.4, the Protocol does not apply to vessels and aircraft entitled to sovereign immunity under international law, although Contracting Parties must ensure that any such vessels and aircraft owned or operated by them act in a manner consistent with the object and purpose of the Protocol. Pursuant to Article 10.5, a Contracting Party may declare that it shall apply the provisions of the Protocol to the vessels and aircraft referred to in paragraph 4, although recognising that only the Contracting Party making the declaration may enforce those provisions against such vessels and aircraft.

Implement by binding norms?

Also Article 10.1, 3, 4 and 5 relate to the application of the Protocol; so to the extent that such application is by binding norms, it will be appropriate to implement those paragraphs of Article 10 by binding norms.

Article 10.2

Article 10.2 relates to implementation of the Protocol as a whole; whilst the provision itself needs no specific implementation by binding norms its requirements relate to how Contracting Parties should implement the Protocol.

Article 2 of the Protocol expressly requires Contracting Parties to introduce "effective measures" to implement the Protocol. Article 10.2 adds requirements to take appropriate measures in accordance with international law to prevent and if necessary punish acts contrary to the provisions of this Protocol.

Other provisions in the Protocol require its Contracting Parties to take "measures". Some of those obligations require the adoption of administrative or legislative *measures*³². There is also reference to permitting and regulatory *measures*³³.

When used without other modifiers, the term "measures" allows Contracting Parties a degree of discretion as to the choice of means of implementation appropriate to their national legal system. Nevertheless it may be necessary for Contracting Parties to implement some provisions in the Protocol by binding norms.

In the Article-by-Article discussion in this Guidance there are a number of explanations of why it is necessary to implement particular provisions by binding norms, and those explanations will not be repeated here.

But it is only in Article 10.2 that the Protocol requires Contracting Parties to "punish". In order to "punish" an act, a Contracting Party would impose a penalty or sanction upon a person or persons for an offence against a law. In many states there may be constitutional or other national legal constraints that would require a national legal provision to form the basis of a penalty or sanction. In any case one would expect the act punished to be set out in national law introduced by binding norms; and that legislation might well include provisions – such as authority for inspections and related powers of search and seizure – necessary to enforce the legislation.

³² See Articles 4.1.2, 9.4.2 and 26.3.

³³ See Article 7.3.

Other information

The reporting of dumping or incineration at sea that may be contravention of the Protocol, often referred to as the reporting of illegal incidents, should be through the form attached to the circular *Reporting Procedure of observed dumping incidents which may be in violation of International Ocean dumping treaties*³⁴. Although no such reports have been filed to date, any such reports are within the mandate of the Compliance Group to review.

Under Article 10.4, Contracting Parties are obliged to inform the IMO about measures they adopt to ensure their sovereign immune vessels or aircraft act in a manner consistent with the object and purpose of the Protocol.

Examples

A Contracting Party implements its policy to take appropriate measures to prevent and punish acts contrary to the provisions of the Protocol pursuant to **Article 10.2**. Amongst the measures it takes are the following:

- it authorises one of its authorities to assess civil penalties up to a maximum sum for each violation of a permit or permit requirement, taking into account relevant factors, such as gravity of the violation, prior violations, and demonstrations of good faith; and provides that no penalty can be assessed until after notice and opportunity for a hearing;
- stricter criminal penalties (including seizure and forfeiture of vessels) for violations of its implementing legislation are fixed;
- there are more severe civil and criminal penalties for dumping of particularly hazardous wastes;
- an enforcement authority is directed to conduct surveillance and other appropriate enforcement activities to prevent unlawful transportation of material for dumping, or unlawful dumping; and
- individuals are allowed to take legal action against any person for violation of the enforcing legislation.

A mariner on a ship observes the crew on another passing ship pushing large, uncovered containers that appear to contain garbage into the sea. He suspects illegal dumping, and so notifies a contact point from a coastal state so that the proper authorities can determine an appropriate action. He also makes a note of the identity of the passing ship and completes a dumping incident form, making use of the procedures Contracting Parties have adopted under Article 10.3.

³⁴ LC.2/Circ.430, 1 August 2003.

Article 11: Compliance Procedures

Text of Article

1 No later than two years after the entry into force of this Protocol, the Meeting of Contracting Parties shall establish those procedures and mechanisms necessary to assess and promote compliance with this Protocol. Such procedures and mechanisms shall be developed with a view to allowing for the full and open exchange of information, in a constructive manner.

2 After full consideration of any information submitted pursuant to this Protocol and any recommendations made through procedures or mechanisms established under paragraph 1, the Meeting of Contracting Parties may offer advice, assistance or cooperation to Contracting Parties and non-Contracting Parties.

Are there special issues to be considered for implementation?

There are no obligations for individual Contracting Parties under this Article

Implement by binding norms?

Article 11 does not require implementation by individual Contracting Parties.

Other information

In 2007 the Meeting of the Contracting Parties adopted a decision on Compliance Procedures and Mechanisms Pursuant to Article 11 of the 1996 Protocol to the London Convention 1972³⁵ (the compliance decision).

The objective of the compliance procedures and mechanisms is to assess and promote compliance with the Protocol with a view to allowing for the full and open exchange of information, in a constructive manner. The compliance decision established procedures and mechanisms on compliance, including a Compliance Group, whilst providing that the Meeting itself retains overall responsibility for compliance matters.

Under the procedures, the Meeting of Contracting Parties may, *inter alia*, refer individual, systemic and other compliance issues to the Compliance Group, and offer advice, assistance or cooperation to Contracting Parties and non-Contracting Parties, review reports and, as appropriate, undertake other activities to promote compliance. A Party can raise an issue regarding individual situations of possible non-compliance regarding itself, or another Party when it has an interest that is affected or likely to be affected by the possible non-compliance. Under the procedures the Compliance Group may, *inter alia*, consider an individual Contracting Party's possible non-compliance, make recommendations on systemic compliance issues, make recommendations on other activities to promote compliance, and upon request of a non-Party, provide advice and guidance to facilitate its becoming a Party to the Protocol.

It is helpful when Contracting Parties consider nominating members of the Compliance Group to support, influence and participate in its activities and in turn learn to strengthen their own Protocol implementation.

Help and assistance by the Compliance Group may be available to support implementation.

³⁵ LC 29/17, annex 7.

The IMO's web page on compliance is at:

<http://www.imo.org/en/OurWork/Environment/LCLP/Compliance/Pages/default.aspx>

The decision on compliance is at:

<http://www.imo.org/en/OurWork/Environment/LCLP/Compliance/Documents/Compliance%20Procedures.pdf>

Article 12 Regional Cooperation

Text of Article

In order to further the objectives of this Protocol, Contracting Parties with common interests to protect the marine environment in a given geographical area shall endeavour, taking into account characteristic regional features, to enhance regional cooperation including the conclusion of regional agreements consistent with this Protocol for the prevention, reduction and where practicable elimination of pollution caused by dumping or incineration at sea of wastes or other matter. Contracting Parties shall seek to cooperate with the parties to regional agreements in order to develop harmonized procedures to be followed by Contracting Parties to the different conventions concerned.

Are there special issues to be considered for implementation?

Apart from the global Protocol, there are a number of regional instruments for the protection of the marine environment that include provisions relating to the issue of dumping of wastes and other matter at sea: they include the Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention), the Convention for the Protection of the Mediterranean Sea Against Pollution (the Barcelona Convention), the Convention On The Protection Of The Marine Environment Of The Baltic Sea Area (the Helsinki Convention), the Convention for the Protection of Natural Resources and Environment of the South Pacific Region (the Noumea Convention) and the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention).

Where a state is already a Party to a regional multilateral environmental agreement relating to dumping and that state wishes to become a Contracting Party to the Protocol it may need to adapt whatever implementing legislation it has in place in order fully to implement the Protocol.

Implement by binding norms?

Nothing in this article requires implementation by binding norms.

Other information

A number of regional workshops on the Protocol have been convened. For more detail, see the discussion of Article 13 below.

Article 13: Technical Cooperation and Assistance

Text of Article

1 Contracting Parties shall, through collaboration within the Organization and in coordination with other competent international organizations, promote bilateral and multilateral support for the prevention, reduction and where practicable elimination of pollution caused by dumping as provided for in this Protocol to those Contracting Parties that request it for:

- .1 training of scientific and technical personnel for research, monitoring and enforcement, including as appropriate the supply of necessary equipment and facilities, with a view to strengthening national capabilities;**
- .2 advice on implementation of this Protocol;**
- .3 information and technical cooperation relating to waste minimization and clean production processes;**
- .4 information and technical cooperation relating to the disposal and treatment of waste and other measures to prevent, reduce and where practicable eliminate pollution caused by dumping; and**
- .5 access to and transfer of environmentally sound technologies and corresponding know-how, in particular to developing countries and countries in transition to market economies, on favourable terms, including on concessional and preferential terms, as mutually agreed, taking into account the need to protect intellectual property rights as well as the special needs of developing countries and countries in transition to market economies.**

2 The Organization shall perform the following functions:

- .1 forward requests from Contracting Parties for technical cooperation to other Contracting Parties, taking into account such factors as technical capabilities;**
- .2 coordinate requests for assistance with other competent international organizations, as appropriate; and**
- .3 subject to the availability of adequate resources, assist developing countries and those in transition to market economies, which have declared their intention to become Contracting Parties to this Protocol, to examine the means necessary to achieve full implementation.**

Are there special issues to be considered for implementation?

Article 13 provides for an extensive regime of technical cooperation and assistance. For the purposes of this Guidance, Article 13 is significant because it sets out how help may be available to states that wish better to implement the Protocol.

In particular, by virtue of Article 13.1.2 Contracting Parties are required, through collaboration within the IMO and in coordination with other competent international organizations, to promote support for the provision of advice on implementation of the Protocol to those Parties that request help.

Article 13.2 sets out a number of functions that are required to be performed by the IMO, and Article 13.2.3 in particular provides for the assistance of developing countries and countries in transition to market economies that wish to become Contracting Parties. In practice, this means that, subject to availability of funds, the IMO has provided assistance to countries that are preparing for accession and implementation of the Protocol. IMO assistance could, for example, be in the form of national and regional workshops to promote the Protocol or deliver technical training to build the capacity to implement the Protocol. The Compliance Group also has this as one of its standing functions.

Implement by binding norms?

Not required.

Other information

There is a range of assistance available to states exploring whether to become or seeking to become Contracting Parties to the Protocol. That assistance includes:

- advice or assistance directly from the IMO Secretariat;
- advice or assistance from the London Protocol Compliance Group;
- twinning/partnering arrangements with other Contracting Parties;
- regional and national workshops to provide guidance and capacity building on implementation of the Protocol;
- outreach and coordination on compliance responsibilities, reporting and actions to remove barriers to compliance under a flexible implementation plan;
- assistance or guidance on the management and operation of national dumping programmes, including enhanced management of dredged material and designated dumping sites for dredged material;
- educational, training and capacity-building activities on generic and specific waste assessment guidelines and technical issues;
- guidance and consultation on the development of legislation, standards and guidelines supporting implementation of the London Protocol; and
- the facilitation of contacts with other international organizations on the prevention of marine pollution and protection of marine resources through the control of ocean-based and land-based sources of pollution.

There are a number of resource documents available including the following –

- "The London Protocol: What is it and how to implement it", which is a practical manual.

- Technical guidance related to waste assessment
- Technical guidance related to monitoring
- Technical guidance on other London Protocol topics

For fuller guidance on how to seek assistance, see the guide set out in Annex 7 of the Report of the Thirty-Seventh Consultative Meeting and the Tenth Meeting of Contracting Parties³⁶ (the How to seek assistance guide).

Annex 1: Wastes or Other Matter that may be considered for Dumping

Text of Annex

1. The following wastes or other matter are those that may be considered for dumping being mindful of the Objectives and General Obligations of this Protocol set out in articles 2 and 3:

- .1 dredged material;**
- .2 sewage sludge;**
- .3 fish waste, or material resulting from industrial fish processing operations;**
- .4 vessels and platforms or other man-made structures at sea;**
- .5 inert, inorganic geological material;**
- .6 organic material of natural origin;**
- .7 bulky items primarily comprising iron, steel, concrete and similarly unarmful materials for which the concern is physical impact, and limited to those circumstances where such wastes are generated at locations, such as small islands with isolated communities, having no practicable access to disposal options other than dumping; and**
- .8 Carbon dioxide streams from carbon dioxide capture processes for sequestration.**

2. The wastes or other matter listed in paragraphs 1.4 and 1.7 may be considered for dumping, provided that material capable of creating floating debris or otherwise contributing to pollution of the marine environment has been removed to the maximum extent and provided that the material dumped poses no serious obstacle to fishing or navigation.

3. Notwithstanding the above, materials listed in paragraphs 1.1 to 1.8 containing levels of radioactivity greater than *de minimis* (exempt) concentrations as defined by the IAEA and adopted by Contracting Parties, shall not be considered eligible for dumping; provided further that within 25 years of 20 February 1994, and at each 25 year interval thereafter, Contracting Parties shall complete a scientific study relating to all

³⁶ LC 37/16, 22 October 2015.

radioactive wastes and other radioactive matter other than high level wastes or matter, taking into account such other factors as Contracting Parties consider appropriate and shall review the prohibition on dumping of such substances in accordance with the procedures set forth in article 22.

4. Carbon dioxide streams referred to in paragraph 1.8 may only be considered for dumping, if:

- .1 disposal is into a sub-seabed geological formation; and**
- .2 they consist overwhelmingly of carbon dioxide. They may contain incidental associated substances derived from the source material and the capture and sequestration processes used; and**
- .3 no wastes or other matter are added for the purpose of disposing of those wastes or other matter.**

Are there special issues to be considered for implementation?

Annex 1 lists the only wastes that may be considered for dumping under the Protocol.

Annex 1 must be read in conjunction with Article 4. Only wastes and other matter listed in Annex 1 escape the general prohibition on dumping in Article 4.1.

Whilst the dumping of Annex 1 waste and other matter is not prohibited, it is strictly controlled; such dumping is subject to permits issued in compliance with the provisions of Annex 2, which are discussed below. Also there are a number of other important considerations about the dumping of wastes and other matter listed in Annex 1.

First, such dumping may be considered bearing in mind the Objectives and General Obligations of the Protocol set out in Articles 2 and 3. For example, any consideration of dumping must be mindful of the overarching obligation to protect and preserve the marine environment and reduce and where practicable eliminate pollution caused by dumping or incineration at sea set out in Article 2; it will also be necessary to bear in mind the precautionary approach, the polluter pays approach and non-transference as provided for in Article 3.

Second, paragraph 2 of Annex 1 provides that wastes or other matter listed in paragraphs 1.4 and 1.7 may be considered for dumping, provided that (a) material capable of creating floating debris or otherwise contributing to pollution of the marine environment has been removed as much as possible, and (b) the material dumped poses no serious obstacle to fishing or navigation³⁷.

Third, paragraph 3³⁸ of Annex 1 provides that all materials listed in Annex 1 containing levels of radioactivity greater than *de minimis* may not be considered eligible for dumping³⁹.

³⁷ Carbon dioxide streams from carbon dioxide capture processes for sub-seabed sequestration is exempted from this requirement for obvious reasons.

³⁸ Paragraph 3 also contains a requirement for Contracting Parties to collectively complete scientific studies relating to radioactive wastes and other radioactive matter and a review of the prohibition of dumping of such substances.

³⁹ This ban on the disposal of radioactive wastes was the subject of a required 25 year review which the Meeting of Contracting Parties to the London Protocol and Convention completed in 2016. Upon completion of the review, the Contracting Parties to the Protocol and Convention unanimously agreed that the ban should remain in place.

Implement by binding norms?

Yes. It is necessary to implement the Article 4.1.2 requirement for a permit by binding norms, and it follows that Annex 1, which sets out provisions that govern the Article 4.1.2 permitting regime, also needs implementing by binding norms, which will provide the basis for the administrative acts of permitting authorities.

Annex 2 Assessment of Wastes or Other Matter that may be considered for Dumping

Text of Annex

GENERAL

1 The acceptance of dumping under certain circumstances shall not remove the obligations under this Annex to make further attempts to reduce the necessity for dumping.

WASTE PREVENTION AUDIT

2 The initial stages in assessing alternatives to dumping should, as appropriate, include an evaluation of:

- .1 types, amounts and relative hazard of wastes generated;
- .2 details of the production process and the sources of wastes within that process; and
- .3 feasibility of the following waste reduction/prevention techniques:
 - .1 product reformulation;
 - .2 clean production technologies;
 - .3 process modification;
 - .4 input substitution; and
 - .5 on-site, closed-loop recycling.

3 In general terms, if the required audit reveals that opportunities exist for waste prevention at source, an applicant is expected to formulate and implement a waste prevention strategy, in collaboration with relevant local and national agencies, which includes specific waste reduction targets and provision for further waste prevention audits to ensure that these targets are being met. Permit issuance or renewal decisions shall assure compliance with any resulting waste reduction and prevention requirements.

4 For dredged material and sewage sludge, the goal of waste management should be to identify and control the sources of contamination. This should be achieved through implementation of waste prevention strategies and requires collaboration between the relevant local and national agencies involved with the control of point and non-point sources of pollution. Until this objective is met, the problems of contaminated dredged material may be addressed by using disposal management techniques at sea or on land.

CONSIDERATION OF WASTE MANAGEMENT OPTIONS

5 Applications to dump wastes or other matter shall demonstrate that appropriate consideration has been given to the following hierarchy of waste management options, which implies an order of increasing environmental impact:

- .1 reuse;
- .2 off-site recycling;
- .3 destruction of hazardous constituents;
- .4 treatment to reduce or remove the hazardous constituents; and
- .5 disposal on land, into air and in water.

6 A permit to dump wastes or other matter shall be refused if the permitting authority determines that appropriate opportunities exist to re-use, recycle or treat the waste without undue risks to human health or the environment or disproportionate costs. The practical availability of other means of disposal should be considered in the light of a comparative risk assessment involving both dumping and the alternatives.

CHEMICAL, PHYSICAL AND BIOLOGICAL PROPERTIES

7 A detailed description and characterization of the waste is an essential precondition for the consideration of alternatives and the basis for a decision as to whether a waste may be dumped. If a waste is so poorly characterized that proper assessment cannot be made of its potential impacts on human health and the environment, that waste shall not be dumped.

8 Characterization of the wastes and their constituents shall take into account:

- .1 origin, total amount, form and average composition;
- .2 properties: physical, chemical, biochemical and biological;
- .3 toxicity;
- .4 persistence: physical, chemical and biological; and
- .5 accumulation and biotransformation in biological materials or sediments.

ACTION LIST

9 Each Contracting Party shall develop a national Action List to provide a mechanism for screening candidate wastes and their constituents on the basis of their potential effects on human health and the marine environment. In selecting substances for consideration in an Action List, priority shall be given to toxic, persistent and bioaccumulative substances from anthropogenic sources (e.g., cadmium, mercury, organohalogens, petroleum hydrocarbons, and, whenever relevant, arsenic, lead, copper, zinc, beryllium, chromium, nickel and vanadium, organosilicon compounds, cyanides, fluorides and pesticides or their by-products other than organohalogens). An Action List can also be used as a trigger mechanism for further waste prevention considerations

10 An Action List shall specify an upper level and may also specify a lower level. The upper level should be set so as to avoid acute or chronic effects on human health or on sensitive marine organisms representative of the marine ecosystem. Application of an Action List will result in three possible categories of waste:

- .1 wastes which contain specified substances, or which cause biological responses, exceeding the relevant upper level shall not be dumped, unless made acceptable for dumping through the use of management techniques or processes;
- .2 wastes which contain specified substances, or which cause biological responses, below the relevant lower levels should be considered to be of little environmental concern in relation to dumping; and
- .3 wastes which contain specified substances, or which cause biological responses, below the upper level but above the lower level require more detailed assessment before their suitability for dumping can be determined.

DUMP-SITE SELECTION

11 Information required to select a dump-site shall include:

- .1 physical, chemical and biological characteristics of the water-column and the seabed;
- .2 location of amenities, values and other uses of the sea in the area under consideration;
- .3 assessment of the constituent fluxes associated with dumping in relation to existing fluxes of substances in the marine environment; and
- .4 economic and operational feasibility.

ASSESSMENT OF POTENTIAL EFFECTS

12 Assessment of potential effects should lead to a concise statement of the expected consequences of the sea or land disposal options, i.e., the "Impact Hypothesis". It provides a basis for deciding whether to approve or reject the proposed disposal option and for defining environmental monitoring requirements.

13 The assessment for dumping should integrate information on waste characteristics, conditions at the proposed dump-site(s), fluxes, and proposed disposal techniques and specify the potential effects on human health, living resources, amenities and other legitimate uses of the sea. It should define the nature, temporal and spatial scales and duration of expected impacts based on reasonably conservative assumptions.

14 An analysis of each disposal option should be considered in the light of a comparative assessment of the following concerns: human health risks, environmental costs, hazards, (including accidents), economics and exclusion of future uses. If this assessment reveals that adequate information is not available to determine the likely effects of the proposed disposal option then this option should not be considered further. In addition, if the interpretation of the comparative assessment shows the dumping option to be less preferable, a permit for dumping should not be given.

15 Each assessment should conclude with a statement supporting a decision to issue or refuse a permit for dumping.

MONITORING

16 Monitoring is used to verify that permit conditions are met – compliance monitoring – and that the assumptions made during the permit review and site selection process were correct and sufficient to protect the environment and human health – field monitoring. It is essential that such monitoring programmes have clearly defined objectives.

PERMIT AND PERMIT CONDITIONS

17 A decision to issue a permit should only be made if all impact evaluations are completed and the monitoring requirements are determined. The provisions of the permit shall ensure, as far as practicable, that environmental disturbance and detriment are minimized and the benefits maximized. Any permit issued shall contain data and information specifying:

- .1 the types and sources of materials to be dumped;
- .2 the location of the dump-site(s);
- .3 the method of dumping; and
- .4 monitoring and reporting requirements.

18 Permits should be reviewed at regular intervals, taking into account the results of monitoring and the objectives of monitoring programmes. Review of monitoring results will indicate whether field programmes need to be continued, revised or terminated and will contribute to informed decisions regarding the continuance, modification or revocation of permits. This provides an important feedback mechanism for the protection of human health and the marine environment.

Are there special issues to be considered for implementation?

By virtue of Article 20, Annex 2 is an integral part of the Protocol. Further, Article 4.1.2 provides that Contracting Parties shall adopt administrative or legislative measures to ensure that issuance of permits and permit conditions comply with provisions of Annex 2. Article 9.2 sets out the scenarios in which permits must be issued and Article 9.3 provides that in issuing permits the authority must comply with the requirements of Article 4, together with such additional criteria, measures and requirements as they may consider relevant. The Annex sets out a step-by-step procedure to assess wastes or other matter that may be considered for dumping, establishing a practical way to manage waste in compliance with the Protocol. The procedure in the Annex embodies a precautionary approach, recognizing that the quantity of waste or other matter dumped needs to be reduced in order to avoid pollution of the sea.

The Annex contains a mixture of binding and non-binding provisions. For example, paragraphs 5 and 6 on waste management set legally binding requirements that relate to applications to dump waste and other matter, and identify circumstances in which a permit to dump waste must be refused. On the other hand, paragraphs 12 to 15 on assessment of potential effects use the expression "should", and thus are not legally binding.

Implement by binding norms?

As we have seen, it is necessary to implement Article 4.1.2, which provides that the dumping of wastes or other matter listed in Annex 1 requires a permit, by binding norms. Article 4.1.2 also requires Contracting Parties to adopt administrative or legislative measures to ensure that issuance of permits and permit conditions comply with provisions of Annex 2. To the extent that it is necessary to do so to comply with the requirements of Article 4.1.2 Contracting Parties must implement Annex 2 by binding norms.

Other information

In order to provide guidance for implementing Annex 2, the Protocol's Contracting Parties developed a document titled *Guidelines for the Assessment of Wastes or Other Matter That May Be Considered for Dumping* sometimes known as the generic Waste Assessment Guidance (the WAG)⁴⁰. After that, a series of eight specific waste assessment guidelines (that is, one specific guideline for each category of waste listed in Annex 1, known as the specific WAGs) have been developed⁴¹.

The WAG complements and elaborates on the provisions in Annex 2 that deal with the assessment of wastes or other material that may be considered for dumping.

The WAG is intended for use by national authorities responsible for regulating the ocean dumping of wastes. It contains procedures to guide these authorities in evaluating applications for disposal of wastes in a manner consistent with the provisions of the Protocol. The WAG offers a general approach to pollution assessment and may be applied in many fields of waste management.

2006 amendment of the Protocol

Text of amendment⁴²

AMENDMENT TO ANNEX 1 TO THE LONDON PROTOCOL

1.8 Carbon dioxide streams from carbon dioxide capture processes for sequestration
...

4. Carbon dioxide streams referred to in paragraph 1.8 may only be considered for dumping, if:

.1 disposal is into a sub-seabed geological formation; and

⁴⁰ For more information on the generic WAG and the guidelines specific to categories of waste, see: <http://www.imo.org/en/OurWork/Environment/LCLP/Publications/wag/Pages/default.aspx>

⁴¹ A list of the nine separate guidelines addressing the assessment of specific waste categories may be found in the How to seek assistance guide: see page 5 of Annex 7 to LC 37/16.

Those waste assessment guidelines are available at IMO publications (ISBN 978-92-801- 1613-7, IMO publication sales number IA531E)
<http://www.imo.org/en/OurWork/Environment/LCLP/Publications/wag/Documents/2014%20WAGs%20English.zip>

⁴² For the purposes of brevity, the entire text of this amendment is not reproduced here. The amendment was adopted on 2 November 2006, by Resolution LP.1(1), see circular LC-LP.1/Circ.5.

- .2 they consist overwhelmingly of carbon dioxide. They may contain incidental associated substances derived from the source material and the capture and sequestration processes used; and
- .3 no wastes or other matter are added for the purpose of disposing of those wastes or other matter.

Are there special issues to be considered for implementation?

The 2006 Amendment entered into force in accordance with Article 22.4 of the Protocol 100 days after its adoption, on 10 February 2007, for each Contracting Party to the Protocol⁴³.

Of the three Protocol Amendments – 2006, 2009 and 2013 – the 2006 Amendment is the only one that has entered into force⁴⁴. Because the 2006 Amendment has entered into force, the consequential changes that the Amendment made to Annex 1 are already included in the text of Annex 1 as set out above⁴⁵.

By virtue of Article 21.5 of the Protocol, any State that becomes a Contracting Party to the Protocol after the entry into force of the 2006 Amendment becomes a Contracting Party to the Protocol as amended by the 2006 Amendment; and will therefore need to implement the Protocol as so amended. For further explanation of the effect of Article 21.5, see paragraphs 22 to 25 above.

The 2006, 2009 and 2013 Amendments are intended to facilitate the mitigation of increasing concentrations of carbon dioxide in the atmosphere and to ensure that the technologies used for such mitigation (to the extent such technologies may affect the sea) are effectively controlled and regulated.

The 2006 amendment relates to the carbon dioxide streams from carbon dioxide capture processes for sequestration and their disposal into sub-seabed geological formations.

The inclusion of such carbon dioxide streams in Annex 1 by the insertion of a new paragraph 1.8 has the effect of including those streams on the list of wastes or other matter that may be considered for dumping.

A new paragraph 4 in Annex 1 limits the extent to which the carbon dioxide streams may be considered for dumping. Three conditions must be met: first, the disposal has to be into a sub-seabed geological formation; second, the streams must consist overwhelmingly of carbon dioxide, and third no wastes or other matter must be added to the streams for the purpose of disposing those wastes and other matter.

⁴³ The 2006 amendment, however, bound Canada as of January 29th 2007 because Canada ratified before the automatic entry into force.

⁴⁴ The 2006 Amendment was an amendment to an Annex of the Protocol; and as such entered into force under Article 22.4. This is a different procedure from the procedure for the entry into force of the 2009 and 2013 amendments, both of which enter into force pursuant to Article 21.3.

⁴⁵ Conversely, the amendments that the 2009 and 2013 Amendments will make when they enter into force have not been included in the text of the Protocol above.

Implement by binding norms?

Yes. As the 2006 Amendment amends Annex 1, the same considerations that apply with respect to Annex 1 apply with respect to the 2006 amendment.

Other information

The IMO website has more material on carbon capture and sequestration⁴⁶, including the 2012 Specific Guidelines for the Assessment of Carbon Dioxide for Disposal into Sub-Seabed Geological Formations⁴⁷ and the Risk Assessment and Management Framework for CO₂ Sequestration in Sub-Seabed Geological Structures⁴⁸ (CS-SSGS).

2009 amendment of the Protocol⁴⁹

Text of amendment

AMENDMENT TO **ARTICLE 6** OF THE LONDON PROTOCOL

1 Add "1" before: Contracting Parties shall not allow the export of wastes or other matter to other countries for dumping or incineration at sea.

2 Add a new paragraph 2 as follows:

2 Notwithstanding paragraph 1, the export of carbon dioxide streams for disposal in accordance with annex 1 may occur, provided that an agreement or arrangement has been entered into by the countries concerned. Such an agreement or arrangement shall include:

- .1 confirmation and allocation of permitting responsibilities between the exporting and receiving countries, consistent with the provisions of this Protocol and other applicable international law; and
- .2 in the case of export to non-Contracting Parties, provisions at a minimum equivalent to those contained in this Protocol, including those relating to the issuance of permits and permit conditions for complying with the provisions of annex 2, to ensure that the agreement or arrangement does not derogate from the obligations of Contracting Parties under this Protocol to protect and preserve the marine environment.

A Contracting Party entering into such an agreement or arrangement shall notify it to the Organization.

Are there special issues to be considered for implementation?

Entry into force

⁴⁶ See: <http://www.imo.org/en/OurWork/Environment/LCLP/EmergingIssues/CCS/Pages/default.aspx>

⁴⁷ LC 34/15, annex 8.

⁴⁸ LC/SG-CO2 1/7, annex 3.

⁴⁹ For the purposes of brevity, the entire text of this amendment is not reproduced here. The amendment was adopted on 30 October 2009, by resolution LP.3(4), see circular LC-LP.1/Circ.36.

The 2009 Amendment has not entered into force. It will enter into force pursuant to Article 21.3 for the Contracting Parties that have accepted it on the sixtieth day after two-thirds of the Contracting Parties have accepted the amendment. After that the 2009 amendment enters into force for any other Contracting Party on the sixtieth day after the date on which that Contracting Party has accepted the amendment.

Once it enters into force, Article 21.5 will also apply: so any State that becomes a Contracting Party to the Protocol after the entry into force of the 2009 Amendment becomes a Contracting Party to the Protocol as amended by the 2009 Amendment.

Substance

As we have seen, the 2009 Amendment relates to the mitigation of concentrations of carbon dioxide in the atmosphere through the use of carbon capture and storage.

When it enters into force, the 2009 Amendment will modify Article 6. For the time being Article 6 requires Contracting Parties not to allow the export of wastes or other matter to other countries for dumping or incineration at sea.

When the 2009 Amendment enters into force, there will be an exception to that requirement. That exception will relate to the export of carbon dioxide streams for disposal in accordance with Annex 1; that means that the prospective disposal of carbon dioxide streams must, in particular, be in accordance with paragraph 4 of Annex 1.

The exception will be subject to a proviso: the countries concerned in the export must have made an agreement or arrangement. That agreement or arrangement must include confirmation and allocation of permitting responsibility between the exporting and receiving countries, consistent with the provisions of this Protocol and other applicable international law, as provided for in Article 6.2.1. What is more, Article 6.2.2 provides that where the export concerned is to a non-Contracting Party, the agreement or arrangement must include provisions that are at least equivalent to those contained in the Protocol, including provisions relating to the issuance of permits and permit conditions for complying with the provisions of Annex 2, to ensure that the agreement or arrangement does not derogate from the obligations of Contracting Parties under the Protocol to protect and preserve the marine environment.

Implement by binding norms?

When it enters into force, the 2009 Amendment will amend Article 6. As it is appropriate to implement Article 6 by binding norms, it follows that it will also be appropriate to implement by legislation Article 6 as amended by the 2009 Amendment.

Other information

See the other information concerning the 2006 Amendment for references to IMO material on CS-SSGS, and the *Specific Guidelines for Assessment for Inert, Inorganic Geological Material* (2000) with addition of *Eligibility Criteria for Inert, Inorganic Geological Material* (2006) in particular⁵⁰.

When a Contracting Party enters into an agreement or arrangement as provided for in Article 6.2, that Party is required to notify the IMO.

⁵⁰ See LC 34/15, annex 8, and LC/SG-CO2 1/7, annex 3.

Examples

The 2009 Amendment enters into force on 1 July 2020.

- Contracting Party W has accepted the amendment on 1 June 2019. The 2009 Amendment enters into force for W on 1 July 2020.
- Contracting Party X has not accepted the Amendment, which does not enter into force for X, and will not do so until X accepts it.
- State Y accedes to the Protocol on 1 November 2020. When Y becomes a Contracting Party on 1 December 2020, it is bound by the 2009 Amendment.

2013 amendment of the Protocol⁵¹

Text of amendment

Art. 1

Add new paragraph, as follows:

5bis. "Marine geoengineering" means a deliberate intervention in the marine environment to manipulate natural processes, including to counteract anthropogenic climate change and/or its impacts, and that has the potential to result in deleterious effects, especially where those effects may be widespread, long lasting or severe.

Art. 6bis

Add new article, as follows:

Article 6bis

MARINE GEOENGINEERING ACTIVITIES

1 Contracting Parties shall not allow the placement of matter into the sea from vessels, aircraft, platforms or other man-made structures at sea for marine geoengineering activities listed in annex 4, unless the listing provides that the activity or the subcategory of an activity may be authorized under a permit.

2 Contracting Parties shall adopt administrative or legislative measures to ensure that the issuance of permits and permit conditions comply with provisions of annex 5 and takes into account any Specific Assessment Framework developed for an activity and adopted by the Meeting of the Contracting Parties. A permit shall only be issued after the activity has undergone assessment which has determined that pollution of the marine environment from the proposed activity is, as far as practicable, prevented or reduced to a minimum. A permit shall only be issued if the outcome of the assessment is that the activity is not contrary to the aims of the Protocol.

3 Article 4 does not apply to activities listed in annex 4.

⁵¹ For the purposes of brevity, the entire text of this amendment is not reproduced here. The amendment was adopted on 18 October 2013, by resolution LP.4(8), see circular LC-LP.1/Circ.61.

Annex 4

Add new annex, as follows:

Annex 4

MARINE GEOENGINEERING ACTIVITIES

1 OCEAN FERTILIZATION

1 Ocean fertilization is any activity undertaken by humans with the principal intention of stimulating primary productivity in the oceans. Ocean fertilization does not include conventional aquaculture, or mariculture, or the creation of artificial reefs.

2 All ocean fertilization activities other than those referred to in paragraph .3 shall not be permitted.

3 An ocean fertilization activity may only be considered for a permit if it is assessed as constituting legitimate scientific research taking into account any specific placement assessment framework.

Annex 5

Add new annex, as follows:

Annex 5

ASSESSMENT FRAMEWORK FOR MATTER THAT MAY BE CONSIDERED FOR PLACEMENT UNDER ANNEX 4

GENERAL

1 The purpose of this Framework is:

.1 to assess placement activities listed in annex 4; and

.2 to be the basis for developing Specific Assessment Frameworks for placement activities listed in annex 4.

2 Specific Assessment Frameworks developed for placement activities listed in annex 4 shall meet the requirements of this annex and may provide further guidance for assessing and issuing permits.

3 Parties meeting the terms of any Specific Assessment Framework that has been adopted by the Parties shall be deemed to be in compliance with this annex.

DESCRIPTION OF ACTIVITY

4 It first has to be determined whether the proposed activity is an activity covered by the listing in annex 4 and may be permitted in accordance with that annex. The determination requires a full description of the proposed placement activity, including its purpose and covering all stages. It furthermore requires a description of both the working practices during the different stages and the wastes produced (if any) in the relevant stage.

5 The proposal shall demonstrate that:

- the proposed activity is for a purpose other than mere disposal;
- it is designed to fulfil its purpose;
- the rationale, goals, methods, scale, timings and locations as well as predicted benefits and risks are stated as a clear justification for the proposal;
- the proposed activity has the financial resources available to fulfil the programme of work before it commences.

6 A detailed description and characterization of the placement and all its constituents is an essential precondition for the assessment of the proposed activity and the basis for a decision as to whether a permit may be issued. If the proposed activity is so poorly characterized that proper assessment cannot be made a permit shall not be issued.

7 Potential marine geoengineering techniques may require specific marine scientific research in order to, inter alia:

- better understand the natural processes which will be affected;
- understand their potential impacts on the marine environment;
- understand their potential efficacy for geoengineering purposes; and
- be able to effectively apply the assessment framework(s) to proposals for marine geoengineering

8 In case of such a specific marine scientific research activity, the following considerations apply:

- the proposed activity is designed to answer questions that will add to scientific knowledge. Proposals should state their rationale, research goals, scientific hypotheses and methods, scale, timings, duration and locations with clear justification for why the expected outcomes cannot reasonably be achieved by other methods.
- the research methodology to be applied should be appropriate and based on best available scientific knowledge and technology. The methodology should be described in sufficient detail to allow a peer review.
- the proposed activity is subject to scientific peer review at appropriate stages in the assessment process.
- economic interests do not influence the design, conduct and/or outcomes of the proposed activity. There should not be any financial and/or economic gain arising directly from the experiment or its outcomes. This does not preclude payment for services rendered in support of the experiment or future financial impacts of patented technology.

- the proponents of the proposed activity make a commitment to publish the results in peer reviewed scientific publications and include a plan in the proposal to make the data and outcomes publicly available in an appropriate and specified time-frame.
- the proposed activity has the financial resources available before the work commences to fulfil the program of work.

9 Paragraphs 4 and 6 above also apply to marine scientific research.

CONSULTATION

10 Where the placement activity proposed for consideration by a Contracting Party may have any effect in any area of the sea in which another State is entitled to exercise jurisdiction in accordance with international law or in any area of the sea beyond the jurisdiction of any State, potentially affected countries and relevant regional intergovernmental agreements and arrangements should be identified and notified and a plan should be developed for ongoing consultations on the potential impacts, and to encourage scientific cooperation.

11 Contracting Parties should encourage proponents of listed activities to initiate early consultations with stakeholders so that they can address any issues prior to submitting proposals. Contracting Parties shall establish a consultation process with all relevant stakeholders nationally or internationally when a proposal is submitted. This consultation process shall be carried out during the assessment process and before a final permit decision is made. Consent should be sought from all countries with jurisdiction or interests in the region of potential impact without prejudice to international law. Where the placement activity has the potential to have any effects on an area subject to a regional intergovernmental agreement or arrangement, the process should include consultation with the relevant regional organization, with a view to ensuring consistency with applicable regional objectives and requirements.

12 Contracting Parties should consider any advice on proposals for activities listed in annex 4 from independent international experts or an independent international advisory group of experts, especially in situations where paragraph 10 applies. The advice could address scientific, technical, social or economic aspects of the proposal. It shall, as appropriate, include a peer review of the information and data provided by the proponent with regard to its scientific and technical quality. In situations where paragraph 10 applies, potentially affected countries could seek such advice from independent international experts or an independent international advisory group of experts.

INFORMATION FOR ASSESSMENT

13 A common set of information is required for each of the assessment elements of the framework below, namely:

- Placement site selection
- Assessment of matter to be placed into the marine environment
- Assessment of potential effects including the Impact Hypothesis
- Risk management
- Monitoring including the environmental baseline.

PLACEMENT SITE SELECTION

14 In order to address placement site selection, Contracting Parties shall require the following information, as appropriate, to evaluate and to justify the selection of the site(s):

- the physical, geological, chemical, and biological conditions at the proposed site and the area of potential impact, and the uncertainties in these conditions in relation to the proposed activity;
- the impact on amenities, values and other uses of the sea at the proposed site and in the area of potential impacts;
- any constituent fluxes associated with the activity in relation to existing fluxes of substances in the marine environment; and
- economic and operational feasibility.

15 Characterization and assessment of matter proposed to be placed into the marine environment, including its constituents shall take into account as appropriate:

- .1 origin, total amount, form and average composition and fate;
- .2 properties: physical, chemical, biochemical and biological;
- .3 toxicity;
- .4 persistence: physical, chemical and biological; and
- .5 accumulation and biotransformation in biological materials or sediments.

ASSESSMENT OF POTENTIAL EFFECTS

16 Assessment of potential effects shall lead to the "Impact Hypothesis", a concise statement of the expected consequences of the placement activity within the area of the activity and within the area of potential impacts, including transboundary effects. It provides a basis for deciding whether to approve, reject or suggest revisions to the proposed placement activity and for defining risk management and mitigation measures and environmental monitoring requirements.

17 The assessment of potential effects should integrate information on the characteristics of the proposed placement activity, conditions at the proposed site(s), any relevant fluxes, and any proposed construction techniques. The assessment shall specify the potential effects on human health, on marine ecosystem structure and dynamics including sensitivity of species, populations, communities, habitats and processes, amenities and other legitimate uses of the sea. It shall define the nature, temporal and spatial scales and duration of expected impacts based on reasonably conservative assumptions.

18 An analysis of the proposed placement activity should be considered in the light of an assessment of the following concerns: human health risks, environmental costs, hazards, (including accidents), economics and exclusion of future uses. Cumulative impacts from repeated activities or from other activities may also be a

relevant consideration. If this assessment reveals that adequate information is not available to determine the likely effects of the proposed placement activity then this activity shall not be considered further.

19 Each assessment of potential effects shall conclude with a statement supporting a decision to approve, reject or suggest revisions to a proposed placement activity.

RISK MANAGEMENT

20 Risk Management procedures are necessary to ensure that, as far as practicable, environmental risks are minimized, inter alia, through mitigation and contingency planning, and the benefits maximized and that a precautionary approach is applied.

21 Strategies to manage or mitigate risks need to be appropriate for the risks under consideration. They may be imposed as additional conditions by a Contracting Party or included as an intrinsic part of the proposal. The strategies may include temporal, spatial or operational restrictions.

22 Contingency planning will also need to be considered for responding to monitoring in cases where the Impact Hypothesis is found to be incorrect. This may include the cessation of placement activities.

MONITORING

23 A well-designed monitoring regime is necessary and should consider both short and long-term impacts and, where possible, determine whether the activity has achieved its purpose.

24 The purpose of monitoring is to verify that permit conditions are met – compliance monitoring – and that the assumptions made during the permit review and site selection process were correct and sufficient to protect the environment and human health – field monitoring. It is essential that such monitoring programmes have clearly defined objectives. The type, frequency and extent of monitoring will depend on the Impact Hypothesis as well as on predicted local and regional consequences.

25 Monitoring is also used to determine the area of impact and to ascertain that changes are within the range of those predicted. The establishment of baseline conditions prior to a placement activity as well as monitoring of control sites is essential for ongoing monitoring and the detection of any impacts beyond those predicted.

PERMIT AND PERMIT CONDITIONS

26 A decision to issue a permit shall only be made if:

- .1 the assessment has been satisfactorily completed and has shown that the proposed activity is an activity covered by the listing in annex 4 and may be permitted in accordance with that annex;
- .2 the activity is designed to fulfil its purpose. It has to be demonstrated that the proposed activity has the financial resources available before it commences to fulfil the programme of work including any permit conditions requiring e.g. mitigation, contingency planning and monitoring;

- .3 all impact evaluations are satisfactorily completed;**
- .4 the risk management and monitoring requirements have been determined;**
- .5 conditions are in place to ensure that, as far as practicable, environmental disturbance and detriment would be minimized and the benefits maximized;**
- .6 the consultation requirements are fulfilled pursuant to paragraphs 10, 11 and 12;**
- .7 it is determined that pollution of the marine environment from the proposed activity is, as far as practicable, prevented or reduced to a minimum, therefore not contrary to the aims of the Protocol.**

27 In case that adequate information is not available to make the determinations in paragraph 26, the permitting authority shall request additional information before taking a decision or shall not issue a permit.

28 The provisions of the permit shall ensure, as far as practicable, that risks for human health and the marine environment are avoided, environmental disturbance and detriment are minimized and the benefits maximized. Any permit issued shall contain conditions specifying among others:

- .1 the types and sources of matter to be placed;**
- .2 the location of the placement site(s);**
- .3 the methods to be used in achieving the placement activity;**
- .4 risk management, monitoring and reporting requirements; and**
- .5 removal and/or disposal/reuse/recycling of items, as appropriate, at the end of placement activity.**

29 Permits should be reviewed at regular intervals, taking into account the results of monitoring, the objectives of monitoring programmes and relevant research. Review of monitoring results will indicate whether field programmes need to be continued, revised or terminated and will contribute to informed decisions regarding the continuance, modification or revocation of permits. Monitoring provides an important feedback mechanism into future permitting decisions for the protection of human health and the marine environment.

REPORTING

30 The outcomes of any assessment and documentation of any permit issued shall be reported to the Secretariat and shall be made publicly available at or shortly after the time the decision is made. The Secretariat should then inform Contracting Parties.

Are there special issues to be considered for implementation?

Entry into force

There are a number of issues to consider concerning the 2013 Amendment; in short, they are very similar to the considerations arising with respect to the 2009 Amendment.

The 2013 Amendment has not entered into force. It will enter into force pursuant to Article 21.3 for the Contracting Parties that have accepted it on the sixtieth day after two-thirds of the Contracting Parties have accepted the amendment. After that the 2013 amendment enters into force for any other Contracting Party on the sixtieth day after the date on which that Contracting Party has accepted the amendment.

Once it enters into force, Article 21.5 will also apply: so any State that becomes a Contracting Party to the Protocol after the entry into force of the 2013 Amendment becomes a Contracting Party to the Protocol as amended by the 2013 Amendment.

Substance

There are two components to the definition in Article 1.5*bis*. First, for an intervention to be "marine geoengineering" there has to be a "deliberate intervention in the marine environment to manipulate natural processes"; and second, the intervention must have "the potential to result in deleterious effects" as provided for in the definition.

The new Article 6*bis* must be read in conjunction with Annexes 4 and 5.

Before entry into force

In 2008 the Contracting Parties to the London Protocol and London Convention respectively agreed⁵² that the scope of the London Protocol and of the London Convention includes ocean fertilization activities; that given the present state of knowledge, ocean fertilization activities other than legitimate scientific research should not be allowed; that ocean fertilisation activities for legitimate scientific research should be regarded as outside the definition of dumping as placement of matter for a purpose other than the mere disposal under Article 1.4.2.2; and that scientific research proposals should be assessed on a case-by- case basis.

After entry into force

When Article 6*bis*.1 enters into force, Contracting Parties will be under an obligation not to allow placement of certain matter into the sea for marine geoengineering activities listed in annex 4 unless the listing provides that the activity or the subcategory of an activity may be authorized under a permit. In other words, an activity that is dumping and otherwise prohibited, will not be able to benefit from the placement exception from the definition of dumping unless a permit is provided by a Contracting Party for that placement activity, so that there will be a new level of regulation.

The Article 6*bis*.1 prohibition applies only to the placement of matter for marine geoengineering activities listed in Annex 4. At present, Annex 4 lists only one marine geoengineering activity: ocean fertilisation.

The marine geoengineering amendment adds to existing regulation; it would introduce a regulatory scheme for placement activities that are listed on the new Annex 4. Permits may be issued only for legitimate scientific research involving ocean fertilization (all other types of ocean fertilization are prohibited). In future, Annex 4 may be amended to include further marine geoengineering activities.

⁵² See Resolution LC-LP.1(2008) on the Regulation Of Ocean Fertilization, LC 30/16, Report of the Thirtieth Consultative Meeting and the Third Meeting of Contracting Parties, Annex 6.

Article 6*bis*.2 is similar in some respects to Article 4.1.2, and Annex 5 performs a similar function to Annex 2.

Article 6*bis*.2 provides that the issuance of permits and permit conditions must comply with the provisions of Annex 5 and take into account any Specific Assessment Framework developed for an activity and adopted by the Meeting of the Contracting Parties.

There are two prerequisites for the issuance of an Article 6*bis*.2 permit, namely the outcome of the assessment must be that pollution of the marine environment from the proposed activity is, as far as practicable, prevented or reduced to a minimum, and second that the activity is not contrary to the aims of the Protocol.

Paragraphs 1 to 3 of Annex 5 set out the purposes of that Annex: to assess placement activities listed in Annex 4 and to provide the basis of Specific Assessment Frameworks. It also contains provisions concerning environmental impact analysis, consultation requirements, permit issuance and conditions, and reporting.

Implement by binding norms?

When the 2013 Amendment enters into force, the new Article 6*bis* in the Protocol will require Contracting Parties that have consented to be bound by it not to allow placement of matter into the sea as provided in paragraph 1, and to introduce a permitting system pursuant to paragraph 2. Paragraph 3 provides that Article 4 will not apply to activities listed in annex 4.

Article 6*bis*, like Article 6, contains a requirement to "not allow" an activity. What is said about Article 6 above applies by analogy to the requirements of Article 6*bis*, and it follows that it is appropriate to implement that provision by binding norms; it also follows that the new Article 1.5*bis*, which defines a key term used in Article 6*bis*, should be implemented by binding norms. The same goes for the new Annex 4, which also defines a key term used in Article 6*bis*.

It is appropriate to implement Article 4 by binding norms, so it is appropriate to implement Article 6*bis*, which provides that Article 4 will not apply to certain activities, by binding norms. For the time being, the only requirement is to provide that Article 4 does not apply to ocean fertilisation, and Contracting Parties need do no more than this. Should future activities fall within the scope of Article 6*bis*, it will be necessary for Contracting Parties to introduce further implementing measures.

Parties may wish to introduce provisions into their legislation to implement the legally binding obligations in Annex 5, particularly when those obligations relate to the permitting system.

Other information

The IMO webpage on marine geoengineering can be found by following this link: <http://www.imo.org/en/OurWork/Environment/LCLP/EmergingIssues/geoengineering/Pages/default.aspx>

On that webpage there are links to a number of documents, including Resolution LC-LP.1 (2008) on the Regulation of Ocean Fertilization; Resolution LC-LP.2 (2010) on the Assessment Framework for Scientific Research Involving Ocean Fertilization; and Assessment Framework for Scientific Research Involving Ocean Fertilization.

The IMO also hosts a repository of references relating to the application of the Assessment Framework for Scientific Research Involving Ocean Fertilization at:

<http://www.imo.org/en/OurWork/Environment/LCLP/EmergingIssues/geoengineering/OceanFertilizationDocumentRepository/Pages/default.aspx>

Appendix: The legislator's checklist

This checklist focuses on the Protocol provisions that must, or should, be implemented by binding norms. It is designed to:

- (a) **assist Contracting Parties to more easily deliver full implementation** of the Protocol by separating out and listing each obligation that must, or should, be implemented by binding norms; and
- (b) **ensure consistency in implementation**, which is an important objective for a global treaty establishing a regime that depends on Contracting Parties' binding norms working together to create a coherent and functioning international system.

The checklist is in tabular form. Each line of the table will contain:

- (a) a reference to a provision in the Protocol;
- (b) a checkbox; and
- (c) a description of the obligation that is contained in the provision that must, or should, be implemented by binding norms.

Article 1 Definitions	
Article 1.4.1 to 1.4.3	<input type="checkbox"/> Define "dumping" and provide for exclusions.
Article 1.5.1 and 1.5.2	<input type="checkbox"/> Define "incineration at sea" and provide for exclusions.
Article 1.6	<input type="checkbox"/> Define "vessels and aircraft".
Article 1.7	<input type="checkbox"/> Define "sea".
Article 1.8	<input type="checkbox"/> Define "wastes and other matter".
Article 1.9	<input type="checkbox"/> Define "permit".
Article 1.10	<input type="checkbox"/> Define "pollution".
Article 2 Objectives	<input type="checkbox"/> Consider incorporating language in legislation reflecting the objectives of the Protocol in order to guide their administrative authorities, including on what is "not contrary to the aims" of the Protocol for purpose of the definition of what is not dumping.

<p>Article 3 General obligations</p>	
<p>Article 3.1 to Article 3.3</p>	<p><input type="checkbox"/> Ensure that laws and regulations adopted to implement the Protocol apply and/or are consistent with the precautionary approach, the polluter pays approach and non-transference.</p> <p><input type="checkbox"/> Ensure that legislation that may affect implementation of the Protocol is also consistent with the precautionary approach, the polluter pays approach and non-transference.</p>
<p>Article 4 Dumping of waste or other matter</p>	
<p>Article 4.1.1:</p>	<p><input type="checkbox"/> Prohibit the dumping of wastes or other matter, with the exception of those listed in Annex 1.</p>
<p>Article 4.1.2:</p>	<p><input type="checkbox"/> Establish a permitting system, which will include provision for a competent authority, the keeping of records, and monitoring (see Article 9.1 in particular)</p> <p><input type="checkbox"/> Consider further provisions relating to</p> <ul style="list-style-type: none"> - certification of equipment and vessels involved in dumping operations or authority to require this in a permit; - quality assurance for sampling and analysis; and - training/education of officials involved.
<p>Article 4.2</p>	<p><input type="checkbox"/> If a Contracting Party opts to prohibit the dumping of some or all wastes or other matter mentioned in Annex 1, that prohibition will need to be implemented by binding norms and the IMO must be notified.</p>
<p>Article 5 Incineration at Sea</p>	<p><input type="checkbox"/> Prohibit incineration at sea.</p>
<p>Article 6 Export of wastes or other matter</p>	<p><input type="checkbox"/> Prohibit the export of wastes to other countries for dumping or incineration at sea.</p> <p><input type="checkbox"/> Consider implementing the amendments made to Article 6 by the 2009 Amendment.</p> <p><input type="checkbox"/> Ensure alignment with any legislation implementing the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.</p>

Article 7 Internal Waters	
Article 7.2	<input type="checkbox"/> Apply laws and regulations implementing the Protocol to the deliberate disposal of wastes or other matter in marine internal waters, OR introduce other effective permitting and regulatory measures to control the deliberate disposal of wastes or other matter in marine internal waters.
Article 7.3	<input type="checkbox"/> Consider the establishment of mechanisms for the voluntary reporting of wastes or other matter dumped in marine internal waters.
Article 8 Exceptions	
Article 8.1	<input type="checkbox"/> Provide for exception(s) to the prohibitions in Articles 4.1 and 5 in the circumstances described in Article 8.1 (<i>force majeure</i> etc.).
Article 8.2:	<input type="checkbox"/> Introduce measures to issue permits granting exceptions to the prohibitions in Articles 4.1 and 5 in the circumstances described in Article 8.2 (emergencies, etc.).
Article 9 Issuance of Permits and Reporting	
Article 9.1	<input type="checkbox"/> Provide for an appropriate authority or authorities to be designated to <ul style="list-style-type: none"> - issue permits in accordance with Articles 4.1.2 and 8.2 of the Protocol; - keep records; and - monitor the conditions of the sea.
Article 9.2	<input type="checkbox"/> Require the designated authority/ies to issue permits with respect to wastes loaded in its territory or loaded on vessels registered in its territory when the loading occurs in the territory of a non-Contracting Party, bearing in mind the requirements of Article 10.1.
Article 9.3	<input type="checkbox"/> Require the designated authority/ies to apply Article 4 of the Protocol and other additional criteria considered relevant.
Article 10 Application and Enforcement	
Article 10.1	<input type="checkbox"/> Apply the laws and regulations that implement the Protocol to vessels and aircraft registered in the implementing Contracting Party or flying its flag, those loading in its territory, and those engaged in dumping or incineration at sea in areas within which it is entitled to exercise jurisdiction in accordance with international law.

Article 10.2	<input type="checkbox"/> Provide for penalties for infringing implementing laws. Penalties could include imprisonment, fines, compensation, or restitution of environmental damage. <input type="checkbox"/> Provide for an authority or authorities responsible for enforcing national laws and authority for their powers.
Article 10.4	<input type="checkbox"/> Exclude vessels and aircraft entitled to sovereign immunity under international law from implementing provisions. Consider not applying this exclusion to your own country's vessels. <input type="checkbox"/> Consider adoption of laws and regulations to ensure that such vessels and aircraft owned or operated by the implementing Contracting Party act in a manner consistent with the object and purpose of the Protocol.
Article 10.5	<input type="checkbox"/> If the implementing Contracting Party declares that it shall apply the provisions of the Protocol to its vessels and aircraft referred to in Article 10.4, consider the adoption of appropriate implementing laws and regulations.
Annex 1: Wastes or Other Matter that may be considered for Dumping	<input type="checkbox"/> List the wastes or other matter referred to in Annex 1 (or a subset of this list) that may be considered for dumping.
Annex 2 Assessment of Wastes or Other Matter that may be Considered For Dumping	<input type="checkbox"/> Ensure that the issuance of permits and permit conditions under Article 4.1.2 comply with Annex 2.
2006 amendment of the Protocol	<input type="checkbox"/> Consider whether to add to the domestic reverse list the provisions of the 2006 amendment regarding carbon dioxide waste streams.
2009 amendment of the Protocol	<input type="checkbox"/> If a Contracting Party has accepted or intends to accept the 2009 amendment, it must ensure that its implementation of Article 6 reflects the requirements of the 2009 amendment on exports of carbon dioxide for disposal.
2013 amendment of the Protocol	<input type="checkbox"/> If a Contracting Party has accepted or intends to accept the 2013 amendment, it must ensure that its permitting regime reflects the requirements of the amendment, and introduce measures implementing the requirements of Article 6 <i>bis</i> and Annex 4.

