

Marine Environmental Protection  
IFLOS 18 August 2022  
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## The Outline of the Seminar:

### General Conventions:

- (1) The 1982 United Nations Law of the Sea Convention (UNCLOS);
- (2) the 1973/19878 The International Convention for the Prevention of Pollution from Ships (MARPOL)
- (3) The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972", (the London Convention);
- (4) The 1996 London Protocol (to the London Convention);
- (5) The Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention) and the Baltic Marine Environment Protection Commission (the Helsinki Commission - HELCOM) ;
6. 1946 The International Convention for the Regulation of Whaling (Whaling Convention) and the International Whaling Commission (IWC).



# Sources of Marine Pollution

About 80% of marine litter comes from land-based sources, including pollution through the atmosphere, (while 20% comes from marine-based activities such as illegal dumping and shipping for transport, tourism and fishing).

Plastics are estimated to represent between 60 and 80% of the total marine debris. Most of the plastics that have been produced are still present in the environment.

The cumulative amount of plastic produced since the mid-20th century is of the order of 5 billion tons, enough to wrap the Earth in a layer of plastic wrap. The amount projected by 2050, on current trends, is about 40 billion tons, which is enough to wrap 6 layers of plastic wrap around the planet.

- All sea turtle species, 45% of all species of marine mammals, and 21% of all species of sea birds have been affected by ingestion of or entanglement in marine debris, with plastic items being the most frequently documented.
- Plastics can absorb toxins from surrounding seawater, such as pesticides and those in the class of chemicals known as Persistent Organic Pollutants (POPs). They can also release harmful constituents such as Bisphenol A (known to mimic the hormone estrogen), as they degrade.
- Because of their small size, microplastics (plastic fragments < 5mm) can be ingested by a wide range of organisms. This can cause physical damage from abrasions, blockages or accumulation of toxins in organisms.

(<https://safety4sea.com/top-5-sources-of-marine-pollution/>)

**Definition of pollution in Art 1 UNCLOS** – ‘pollution of the marine environment" means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, 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.’

Part XII UNCLOS: Protection and preservation of marine environment

- **Article 192 General obligation** – ‘States have the obligation to protect and preserve the marine environment’.
- **Article 193** - Sovereign right of States to exploit their natural resources: ‘States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.’
- **Article 194** - Measures to prevent, reduce and control pollution of the marine environment: ‘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, using for this purpose the best practicable means at their disposal and in accordance **with their capabilities, and they shall endeavour to harmonize their policies in this connection**’.

## Links between UNCLOS/International Maritime Organisation (IMO) /MARPOL/London Convention /Protocol

One of the main characteristics of Part XII is its 'umbrella' or framework structure aiming at the primacy of international rules and standards over national laws and regulations' (Konig, <https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1594>)

- (1) UNCLOS refers to 'competent international organization', a reference that has been accepted to mean the IMO. UNCLOS has accepted and endorsed the IMO regulations through references to the 'generally accepted international rules', those being interpreted as e.g. MARPOL, London Convention/Protocol (Conventions administered and evolved by IMO).
  - (2) Art. 211 (2) UNCLOS: '2. States shall adopt laws and regulations for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry. **Such laws and regulations shall at least have the same effect as that of generally accepted international rules and standards established through the competent international organization [MARPOL] or general diplomatic conference.'**
- (2 a) Broad State flag jurisdiction.
- (1) Art 210 (4) UNCLOS: 'States, acting especially through competent international organizations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control such pollution. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.' [**London Convention/Protocol**]
  - (2) **However, Article 207: Pollution from land-based sources: There are no such global binding rules**

- The first international treaty against oil pollution at sea was the 1954 International Convention for the Prevention of Pollution of the Sea by Oil.
- MARPOL 73 was adopted by the International Conference on Marine Pollution, convened by the IMCO (now IMO).

Due to the inability to ratify:

- the Convention was modified by the Protocol of 1978.
- The result of this modification was the creation of the MARPOL 73/78 now **MARPOL** (in force in October 1983)

MARPOL has two protocols and six technical Annexes. Its Preamble sets out its objective to ‘achieve the complete elimination of intentional pollution of the marine environment by oil and other harmful substances and the minimization of accidental discharge of such substances’.

**MARPOL covers pollution of the marine environment by ships from operational or accidental causes. (not intentional dumping)**

- **Article 3 -**
- MARPOL applies to:
  - (a) ships entitled to fly the flag of a Party to the Convention; and
  - (b) ships not entitled to fly the flag of a Party but which operate under the authority of a Party.
- MARPOL shall not apply to
  - (a) any warship, naval auxiliary or other ship owned or operated by a State and used the time being, only on government non-commercial service.
  - (c) However, each Party shall ensure by the adoption of appropriate measures not impairing the operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable, with the present Convention
- **Articles 4 to 6 obliging** flag, coastal, and port States to prescribe and enforce prohibitions and sanctions in case of violations. Flag States have to ensure that ships **hold a certificate** of compliance with MARPOL standards, the validity and accuracy of which may be controlled by port State authorities. States Parties have a duty to cooperate in the detection of violations and the enforcement of the conventional provisions. Ships of non-parties shall be submitted to a 'no more favourable treatment' in order to avoid economic disadvantages for ships of States Parties.
- Annex I deals with operational oil pollution. The operational discharge of oil is, with the exception of '**special areas**', permitted under certain restrictive conditions.
- Ships have to fulfil operational requirements and construction standards;
  - to ensure that they are apt to comply with MARPOL standards.
- oil tankers and other ships shall be issued an International **Oil Pollution Prevention Certificate**, and they have to record certain operations and exceptional or accidental discharges in an **Oil Record Book**. **Both documents are open to inspection by port States**.
- the 1992 amendments provided for double hull requirements or equivalent design standards for new tankers and the phase-out of single hull tankers. New amendments regulate ship-to-ship oil transfer operations and the use or carriage of heavy fuel oil in the Antarctic area.

- Article 8 (3) If a Party denies a foreign ship entry to the ports or off-shore terminals under its jurisdiction or takes any action against such a ship for the reason that the ship does not comply with the provisions of the present Convention, the Party shall immediately inform the consul or diplomatic representative of the Party whose flag the ship is entitled to fly, or if this is not possible, the Administration of the ship concerned. Before denying entry or taking such action the Party may request consultation with the Administration of the ship concerned. Information shall also be given to the Administration when a ship does not carry a valid certificate in accordance with the provisions of the Regulations
- .(4) With respect to the ships of non-Parties to the Convention, Parties shall apply the requirements of the present Convention as may be necessary to ensure that no more favourable treatment is given to such ships

The MAPOL although very far reaching in protecting of the environment and innovative in enforcing of environmental regulations, does not include an express provision on the precautionary principle. However, the MEPC adopted on **15 September 1995 a resolution on Guidelines on the Incorporation of the Precautionary Approach in the Context of Specific IMO Activities**.

The Resolution related to Agenda 21 as well as Principle 15 of the 1992 Rio Declaration on Environment and Development. The Guidelines include the whole list of elements to be taken into consideration in order to incorporate the precautionary approach into the decision-making processes of the IMO:

1. anticipation and prevention of environmental problems arising from any regulatory activities of the IMO and striving for continued improvement in all facets of those activities;
2. that solutions to problems and consideration of new and existing policies, programmes, guidelines and regulations are developed in accordance with the precautionary approach;

- Annexes to MARPOL
- pollution by oil (Annex I),
- noxious liquid substances in bulk (Annex II),
- harmful substances carried by sea in packaged form (Annex III),
- sewage (Annex IV),
- air pollution from ships Annex (VI),
- Only Annex I and II are mandatory for States ratifying MARPOL; the other Annexes optional.
- Due to the tacit consent/opting out amendment procedure, the MARPOL Annexes have constantly been updated.

- Annexes I and V contain rules for so-called 'special areas' where for 'recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution' is required (Reg. 1.11 Annex I, Reg. 1.3 Annex V). To special areas more stringent rules are applicable.
- For the purpose of Annex 2, following are the special areas:  
The Antarctic Sea Area
- For the purpose of Annex 4, following are the special areas:  
The Baltic Sea
- For the purpose of Annex 5, following are the special areas:  
The Mediterranean sea area  
The Baltic sea area  
The Black sea area  
The Red sea area  
The Gulf area  
The North Sea area  
The Antarctic Area  
The Wider Caribbean Region

Annex VI of MARPOL and climate change:

Marine Environment Protection Committee of IMO has adopted 3 measures (through amendment of Annex VI ) to combat climate change from ships:

**2011** energy efficiency from ships;

**2016** all ships over 5,000 GRT (Gross registered tonnes), to record their fuel consumption and to report to their flag State and to the IMO

**2018** Initial IMO Strategy on Reduction of GHG Emissions from Ships (a reduction in carbon intensity of international shipping -to reduce CO<sub>2</sub> (carbon dioxide) emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and that total annual GHG emissions)

There are also Particularly Sensitive Sea Areas (PSSA) under the MARPOL. They are areas that need special protection through action by IMO because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities. The criteria for the identification of particularly sensitive sea areas and the criteria for the designation of special areas are not mutually exclusive. In many cases a Particularly Sensitive Sea Area may be identified within a Special Area and vice versa. Guidelines on designating a PSSA are contained in resolution A.982(24) Revised guidelines for the identification and designation of PSSAs/ These guidelines include the following criteria :

- ecological criteria, such as unique or rare ecosystem;

- diversity of the ecosystem or vulnerability to degradation by natural events or human activities;

- social, cultural and economic criteria (such as significance of the area for recreation or tourism);

- and scientific and educational criteria, such as biological research or historical value.

When an area is approved as a particularly sensitive sea area, specific measures can be used to control the maritime activities in that area, such as routing measures, strict application of MARPOL discharge and equipment requirements for ships, such as oil tankers; and installation of Vessel Traffic Services (VTS).

- The following PSSAS have been designated: under Annex I

-Mediterranean Sea

Baltic Sea

Black Sea

Red Sea Gulf area

Gulf of Aden

Antarctic area

North West European Waters

Oman area of the Arabian Sea

Southern South African waters

- In 2005 the EU in order to transpose into EU law the standards introduced by the MARPOL Convention related to the prohibition of polluting discharges into the sea and in order to specify the sanctions to be imposed adopted Directive 2005/35/EC on ship-source pollution and on the introduction of penalties for infringements. The EU is not a party to MARPOL. Therefore it may be worth mentioning that the Commission not only wanted to address the issue, and harmonize it, but even to prescribe criminal sanctions to its Member States. The original Directive was supplemented by Council Framework Decision 2005/667/JHA of 12 July 2005 to strengthen the criminal law framework for the enforcement of the law against ship-source pollution, which was annulled by the European Court of Justice in its case C-440/05 in 23 October 2007. In consequence of this annulment, the European Commission prepared an amendment of the Directive as Directive 2009/123, which incorporated into the body of its text many elements that were part of the previously annulled Framework Decision. In particular it extended the liability for discharges into legal persons and it obliged the Member States to treat illegal discharges not only as infringements but also in some circumstances as criminal acts (Art. 5 (a)).

The EU Directive goes further in the scope of application and its imposition of liability. The Directive established that discharge of polluting substances will be a criminal offence if committed with intent, recklessly or by serious negligence. Any person who has cause or contributed to pollution intentionally or by serious negligence will be subject to sanctions. The major difference between MARPOL Annex I and the Directive can be summarized as follows: First, MARPOL makes a distinction between the operational and accidental discharges, whereas such a distinction does not exist in the Directive. Under MARPOL only operational discharges are subject to criminal sanctions, while the accidental discharges not. Thus, MARPOL provides only very limited cases where the Master or shipowner may be sanctioned. The EU Directive goes further in the scope of application and its imposition of liability. **The Directive established that discharge of polluting substances will be a criminal offence if committed with intent, recklessly or by serious negligence. Any person who has cause or contributed to pollution intentionally or by serious negligence will be subject to sanctions. The major difference between MARPOL Annex I and the Directive can be summarized as follows: First, MARPOL makes a distinction between the operational and accidental discharges, whereas such a distinction does not exist in the Directive. Under MARPOL only operational discharges are subject to criminal sanctions, while the accidental discharges not. Thus, MARPOL provides only very limited cases where the Master or shipowner may be sanctioned**

Annex VI provides for the designation of emission control areas (ECAs) to prevent, reduce, and control emissions of nitrogen oxides, sulphur oxides, and other matter. To date, only three emission control areas have been designated: the **Baltic Sea, the North Sea, and, as of August 2011, the North American ECA.**

## Dumping

The **1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter ('London Convention'; 'LC')** and its **three Annexes** are among the early universal instruments aimed at the protection of the marine environment from deleterious human activities.

Based on a principle:

dumping is permitted unless prohibited (Art. IV).

'(a) "Dumping" means:

- (i) any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea;
- (ii) any deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures at sea.

(b) "Dumping" does not include:

- (i) **the disposal at 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 structures;**

Three categories of wastes were established (Art IV LC); the dumping of wastes listed in Annex I is prohibited. Wastes on this 'black list' include, *inter alia*, harmful metals, industrial waste (with exceptions), radioactive wastes and other radioactive matter (complete prohibition since 1994), and materials produced for biological and chemical warfare. The dumping of wastes listed in Annex II requires a prior special permit. Substances on this 'grey list' include waste containing significant amounts of harmful metals, containers and other bulky waste, and materials which, though of a non-toxic nature, may become harmful due to the quantities being dumped. The dumping of all other wastes is allowed, provided that a prior general permit has been obtained. Annex III lists a number of criteria that have to be taken into account by national authorities when issuing special or general permits. A 1978 amendment extended Annexes I and II to incineration of wastes at sea which was finally stopped in 1994.

- New developments in international environmental law (Environment, International Protection), the 1996 Protocol to the London Convention ('London Protocol'; 'LP') was adopted, superseding the Convention as between its contracting parties which are also parties to the convention (Art. 23 LP). LP is based on a reverse listing principle: **dumping is prohibited unless permitted.**

Each State Party shall take appropriate measures in accordance with international law to prevent and punish acts contrary to the international anti-dumping provisions (Art 10 LP).

States Parties shall prohibit the dumping of any wastes or other matter with the exception of those listed in Annex 1. Wastes listed on this 'reverse list' include, *inter alia*, dredged material, sewage sludge, fish waste or material resulting from industrial fish processing operations, and vessels and platforms or other man-made structures at sea. The dumping of such wastes **requires a permit** complying with the conditions listed in Annex 2. Before issuing a permit, 'particular attention shall be paid to opportunities to avoid dumping in favour of environmentally preferable alternatives' (Art. 4 (1) 1996 Protocol is based on a **precautionary approach (Art. 3 (1) LP)** which was already adopted under the London Convention regime in 1991 (Res. LDC.44(14)); **the polluter pays principle (Art. 3 (2) LP)**; **reporting (Art. 9 LP)**; **technical and financial assistance to developing countries (Art. 13 LP)**. The provisions of the London Protocol are as minimum standards (Art. 3 (4) LP), Art. 210 (6) UNCLOS).

- Climate Change Mitigation and LP:

2007 Amendment to Annex I: **capturing carbon dioxide** for sequestration in subsea geological formations (so called 'carbon capture and storage' CCS). In October 2019, Protocol parties agreed to permit the provisional application of a **2009 amendment allowing for the transboundary export of CO<sub>2</sub> for CCS, under certain circumstances, even though the amendment has not yet entered into force.**

- Controversial measure: ocean fertilisation.

Questions of non-compliance decided by so called Compliance Group. Dispute Settlement Procedures Art. 16.

**Land –based Pollution** No global agreement.

Customary International law: the principle of *sic utere tuo ut alienum non laedas*; Principle 21 of the 1972 Stockholm Declaration;

**UNCLOS:** Article 207(1) invites States to adopt laws and regulations to prevent, reduce, and control pollution of the marine environment from land-based sources, ‘taking into account internationally agreed rules, standards and recommended practices and procedures’.

### **Non-binding instruments**

- the 1985 Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources;
- Agenda 21 of 1992;
- the 1995 Washington Declaration on the Protection of the Marine Environment from Land-based Activities;
- the 1995 Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (1995 Global Programme of Action);
- the 2001 Montreal Declaration on the Protection of the Marine Environment from Land-Based Activities;
- the 2012 Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities.

