

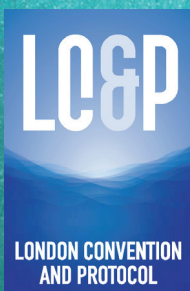
THE LONDON PROTOCOL

WHAT IT IS AND WHY IT IS NEEDED



LONDON PROTOCOL
1996-2016

Global treaty at the forefront
of protecting our oceans –
for present and future generations



INTERNATIONAL
MARITIME
ORGANIZATION

PROTECTING OUR MARINE RESOURCES

For centuries, the world's oceans were used as a dumping ground for wastes generated by people, with little thought given as to the consequences of such actions. It was not until the 1960s that we began to see increased awareness of the impact of such reckless action on the marine environment, on seafood and on other living resources.

In 1972, the London Convention was adopted, banning the dumping of specified wastes at sea, marking a significant step towards regulating the dumping of wastes at sea and protecting the marine environment from human activities.

The London Protocol, adopted in 1996, built on and modernized the principles developed under the earlier treaty. The London Protocol turned the regulation around, fully embracing the precautionary principle and prohibiting all dumping of wastes and other matter, except for those on a prescribed list, which may be assessed and given permits for dumping.

The London Protocol has been protecting the oceans from indiscriminate dumping of wastes and other matter for more than two decades.

FACTS AND FIGURES

- **80%** of marine pollution comes from land-based sources
- Studies estimate that dumping of wastes at sea today contributes a potential **10%** of the overall input of pollutants into the sea
- Dredged material constitutes about **80-90%** of all licensed materials dumped into the sea
- On average **500 million tonnes** of permitted dredged material are dumped annually in waters of countries which have signed up to the London Convention or London Protocol
- Some **10%** of dredged material is contaminated by shipping, industrial and municipal discharges, or by land run-off. It is therefore important to assess if the material is suitable for dumping at sea, before a permit is given

UNREGULATED DUMPING IS PROHIBITED

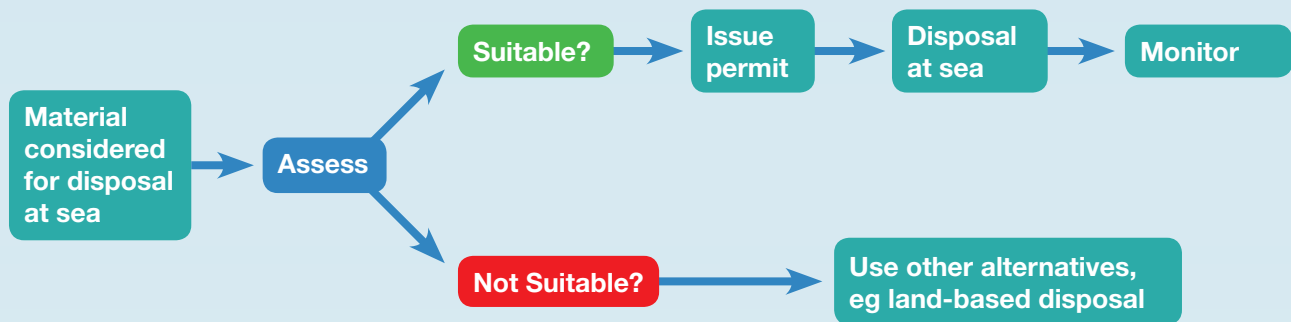
Under the London Protocol, dumping is generally prohibited, but eight wastes may be considered for dumping at sea following a stringent assessment and licensing process. The eight wastes are:

Dredged material	Dredging is essential for safe and efficient sea transport, in order to maintain navigational channels and to keep the water deep enough for shipping traffic. The majority of the waste permitted for dumping comes from dredging, with some 1000 permits issued worldwide annually.
Fish wastes	In some countries with a significant fishing industry, it is not possible to recycle or dispose of fish waste or material resulting from industrial fish processing operations on land. On occasions it may be justified to dispose of this material at sea provided it does not contain contaminants or other biohazards. These permits are issued in a handful of countries only, and generally not more than 10-50 permits annually.
Inert, inorganic geological material	This could be rocks and gravel from excavations and developments, which would not cause a chemical or biological problem when dumped at sea. Some 5-10 permits per year are issued worldwide, sometimes more.
Specific bulky items	Permits for this waste are rare, since this waste type is specifically intended for use by small islands with isolated communities which may lack space on land for disposal of bulky items such as concrete or steel materials.
Sewage sludge	Sewage sludge is the residual material generated through sewage treatment. Very few permits are issued annually, as this waste stream has been phased out in most countries.
Vessels and platforms or other manmade structures at sea	Cleaned and properly prepared vessels and platforms such as those used for oil exploration can be allowed to be dumped at sea. There are usually no more than three to five permits issued per year, but old vessels may also be placed in the marine environment as artificial reefs.
Organic material of natural origin	This could include for example topsoil or agricultural wastes, and some 50-75 permits are issued annually.
Carbon dioxide (CO ₂) streams from carbon dioxide capture processes	Large point sources of CO ₂ emissions, including power plants and cement works, could capture and store CO ₂ in sub-seabed geological formations for permanent isolation. Although several demonstration and R&D projects are taking place, no permits have yet been issued under the London Protocol.

WORLDWIDE DREDGING ACTIVITIES

Dredging is essential for safe and efficient sea transport. The natural processes of sedimentation make dredging necessary, in order to keep the water deep enough in navigational channels for safe shipping. At the same time, the increase in coastal population and the growth in coastal cities since the last century has brought an increasing demand for infrastructure to sustain the growing population, such as port structures.

With the large volumes of dredged sediments comes a responsibility to dispose of the material in an environmentally safe and sound way. Under the London Protocol (and the London Convention), the potential impact on the receiving environment has to be evaluated before a permit for dumping is issued and any disposal activity can go ahead. To support this, a series of waste assessment guidelines have been developed, both generic guidance and specific for each type of waste.



POTENTIAL CONSEQUENCES OF DUMPING AT SEA

Any material dumped at sea may have impacts on the receiving environment. All of these must be assessed before a permit is granted:



Human health

Impacts on fisheries and aquaculture



Impacts on tourism

Potential interruption of navigation and port traffic

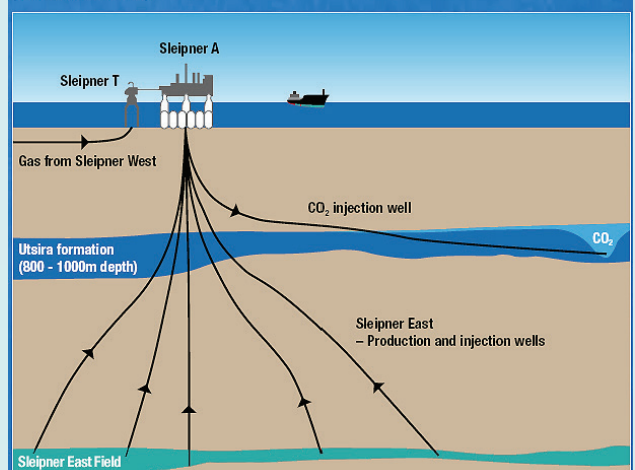
KEY TOOL IN CLIMATE CHANGE MITIGATION

The London Protocol is, so far, the most advanced international regulatory instrument addressing carbon capture and sequestration in sub-seabed geological formations and marine geoengineering.

In 2006, the LP Contracting Parties adopted amendments to regulate carbon capture and storage (CCS) in sub-seabed geological formations for permanent isolation. This practice would typically apply to large point sources of CO₂ emissions, including power plants and cement works, but excludes the use of such CO₂ waste streams for enhanced oil recovery. CCS is seen by the Intergovernmental Panel on Climate Change (IPCC) as one of the short term technological options for reducing net CO₂ emissions to the atmosphere.

In 2013, the LP Contracting Parties adopted amendments to include marine geoengineering activities, allowing them to be permitted for research purposes only. Marine geoengineering can involve introducing natural substances or organisms into the sea, in order to stimulate CO₂ uptake and reduce CO₂ in the atmosphere.

Simplified diagrams of the Sleipner CO₂ Storage Project.
(Source: IPCC 2005)



This includes ocean fertilization, or other activities to deliberately intervene in the marine environment to manipulate natural processes.

POSSIBLE FUTURE AND EMERGING AREAS

The London Protocol is a dynamic and forward looking treaty. Its Parties – the nearly 50 States which have signed up to the Protocol – have a general obligation to protect the marine environment from all sources of pollution. These countries have, in the twenty years since the Protocol was adopted, demonstrated that they react to new challenges when needed. Areas where Parties are

currently taking exploratory or regulatory action include:

- The disposal of wastes from land based mining operations in the marine environment, including deep sea mining
- Implementation of the marine geoengineering regulations, and building experience in this new field

BENEFITS OF THE LONDON PROTOCOL

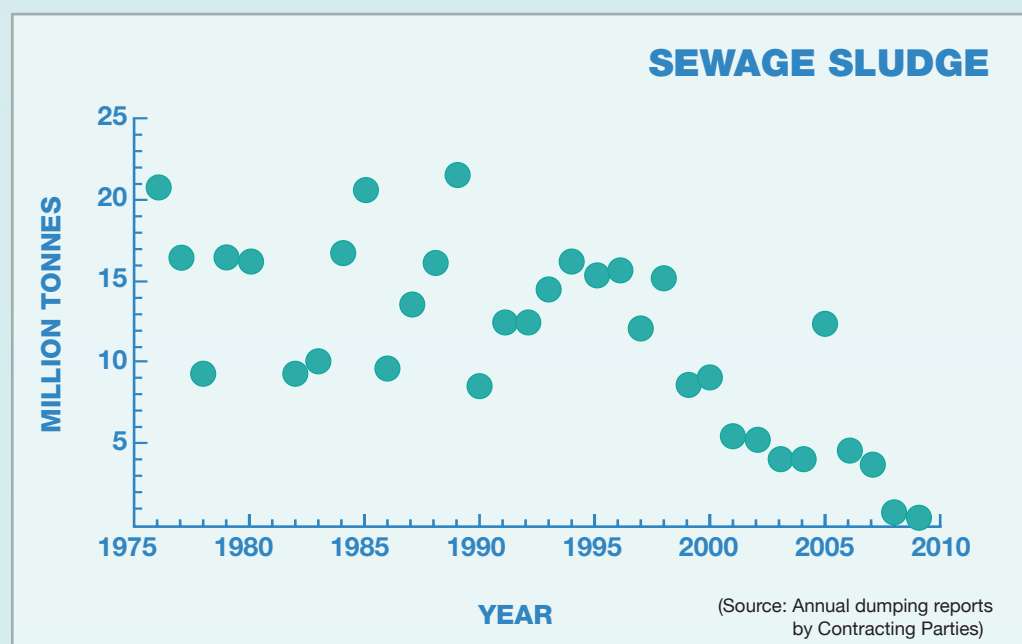
States which have not yet ratified the London Protocol are encouraged to do so. Some of the benefits of the London Protocol include:

- The regulation of dumping activities is an important contribution to the protection of the marine environment, since it reduces the amount of polluted materials that could end up in the sea
- The London Protocol is the most modern treaty for protecting the marine environment from dumping and other new activities at sea. By signing up to the treaty, countries can get involved with influencing future regulation in marine environmental protection
- Greater protection of the marine environment and its living resources provides benefits, such as protecting other economic uses of the sea, including fisheries and tourism, and therefore allows these to further develop in a sustainable way
- The London Protocol facilitates international relations by providing easier access to other international bodies and focused information exchanges, and by fostering dialogue between States about coastal management issues
- Implementing the London Protocol is a means towards achieving the Sustainable Development Goals, since the Protocol contributes to several of the goals, including those relating to conserving and sustainably using the oceans, seas and marine resources; food security; and sustainable economic growth
- The London Protocol is a key pillar in the protection of the marine environment, complementing other treaties such as MARPOL, UNCLOS, and regional seas agreements

IS IT WORKING?

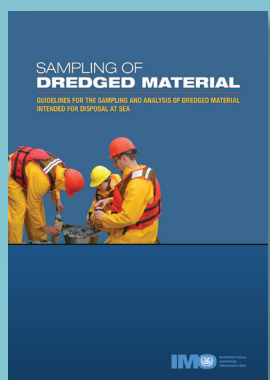
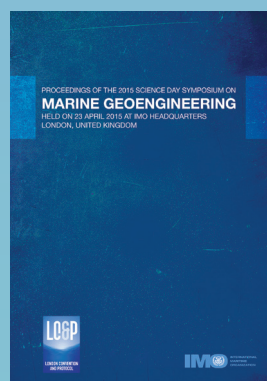
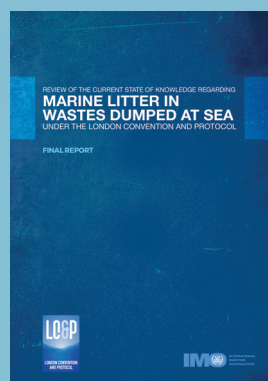
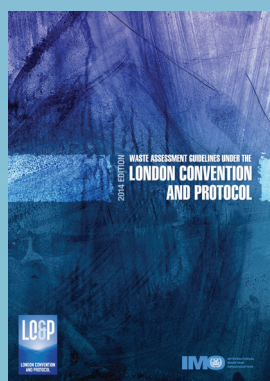
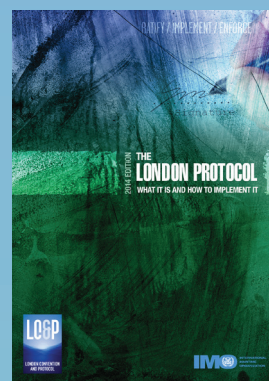
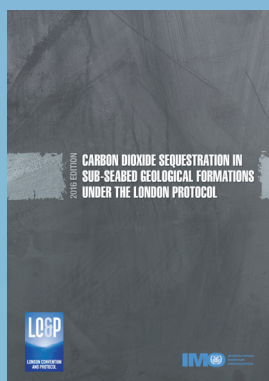
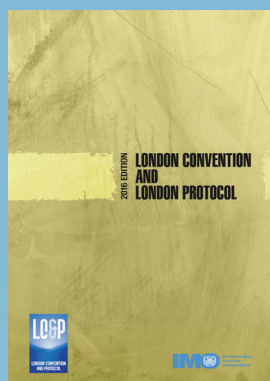
The collaborative efforts among the Contracting Parties to the London Protocol and other related partners and organizations have resulted in a stringent global regulatory regime for dumping, a ban on the most harmful wastes, and a precautionary and proactive instrument for managing waste disposal at sea.

Historical dumping records show that the disposal of several wastes, such as sewage sludge, is decreasing over time.



HOW TO DO IT?

A wide range of guidance and tools are available to current and prospective partners, including the following publications:



For more information, please visit our website or contact us at:

Office for the London Convention/Protocol and Ocean Affairs
International Maritime Organization
4, Albert Embankment
London
SE1 7SR
United Kingdom

Tel: +44 (0)20 7735 7611
Fax: +44 (0)20 7587 3210
Email: olcp@imo.org