Climate Change and the London Convention and Protocol

The London Convention (LC) of 1972 and its 1996 Protocol (LP) address marine pollution from the dumping of wastes and other matter at sea. They are administered by the International Maritime Organization (IMO) and apply to all marine areas, including internal waters, covering a significant proportion of global shipping. There are currently 87 parties to the LC and 41 parties to the LP representing two thirds and one third of global merchant shipping tonnage, respectively.

The Contracting Parties to the LC and LP have recently taken a number of ground-breaking steps to mitigate the impacts of increasing concentrations of carbon dioxide (CO_2) in the atmosphere and to ensure that new technologies with the potential to cause harm to the marine environment are effectively controlled and regulated. The LC and LP have, so far, been the most advanced international regulatory instruments addressing carbon capture and sequestration in sub-sea geological formations (CCS-SSGF) and marine climate engineering such as ocean fertilization (OF).

The International Maritime Organization is the United Nations specialized agency for the regulation of international maritime transport

IMO INTERNATIONAL MARITIME ORGANIZATION

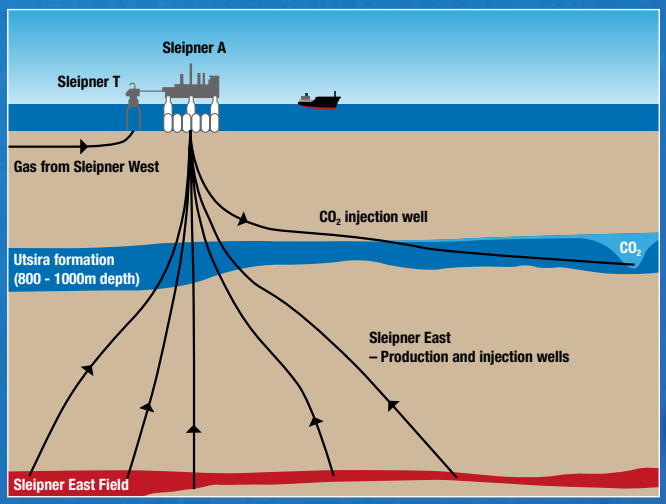
Carbon capture and sequestration in sub-sea geological formations under the London Protocol

In 2006, the LP Contracting Parties adopted amendments to Annex I of the Protocol to regulate CCS-SSGF. These amendments created a legal basis in international environmental law to regulate carbon capture and storage in sub-seabed geological formations for permanent isolation. This practice would typically apply to large point sources of CO_2 emissions, including power plants and cement works, but excludes the use of such CO_2 waste streams for enhanced oil recovery.

One consequence of including CCS-SSGF under the LP is that such activities are now subject to the licensing arrangements contained in the instrument. To facilitate the licensing process, the Contracting Parties adopted a "Risk Assessment and Management Framework for CO_2 Sequestration in Sub-Seabed Geological Structures" and "Specific Guidelines on Assessment of CO_2 Streams for Disposal into a Sub-Seabed Geological Formations". These Guidelines aim at providing advice on how to capture and sequester CO_2 in a manner that meets all the requirements of the LP and is safe for the environment, both marine and atmospheric, for the short- and long-term.

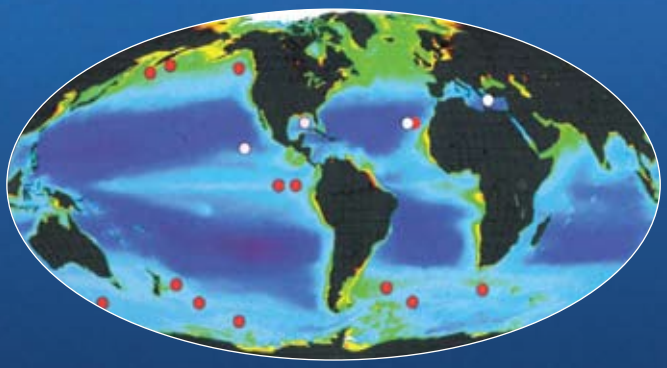
In 2009, the Parties amended LP Article 6 concerning the export of wastes for dumping purposes, aimed at enabling Parties to share transboundary sub-seabed geological formations for sequestration projects, on the condition that the protection standards of the LP are fully met. The amendment shall enter into force sixty days after two-thirds of the Contracting Parties have deposited an instrument of acceptance with the Organization.

Simplified diagrams of the Sleipner CO_2 Storage Project.
(Source: IPCC 2005)

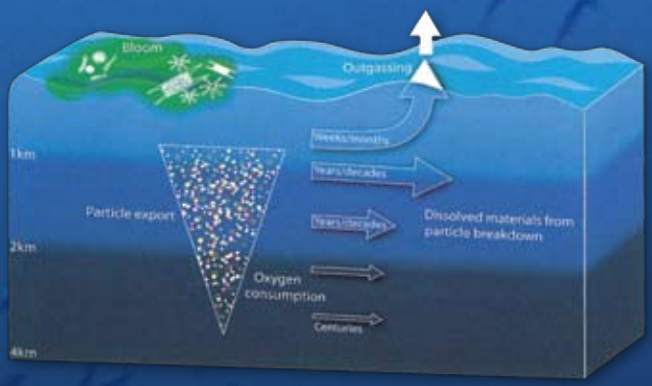


Marine Climate Engineering – Ocean fertilization

Since 2007, having decided that the scope of work of the LC and LP included ocean fertilization, the Contracting Parties are currently establishing, a global, transparent and effective control and regulatory mechanism for ocean fertilization activities and other activities that fall within the scope of the LC and LP and have the potential to cause harm to the marine environment. The latter may include marine geo-engineering activities. In 2010, Parties adopted Resolution LC-LP.2(2010) on the "Assessment Framework for Scientific Research Involving Ocean Fertilization" which guides Parties on how to assess proposals for ocean fertilization research and provides detailed steps for completion of an environmental assessment, including risk management and monitoring.



Sites of iron fertilization experiments carried out to date.
(Source: Philip Boyd and NASA)



Vertical and horizontal transport processes over a range of time scales.
(Source: Philip Boyd, in Encyclopedia of Sustainability Science & Technology)

INTERNATIONAL MARITIME ORGANIZATION

4 Albert Embankment
London SE1 7SR
United Kingdom

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

For further information visit the London Convention and Protocol web-site:
www.londonprotocol.imo.org

Or contact the Office for the London Convention and Protocol via
olcp@imo.org