

THE LONDON PROTOCOL AND LONDON CONVENTION

HOW GLOBAL REGULATION CAN DEAL RESPONSIBLY WITH CLIMATE CHANGE MITIGATION TECHNOLOGIES TO PROTECT THE MARINE ENVIRONMENT

Pressure on Governments and industries to fully engage in climate change mitigation is growing as never before. While some technologies can be used effectively, with appropriate regulation, others may harm the marine environment and provide limited potential to mitigate climate effects.

The international treaty regime made up of the London Protocol and London Convention (LP/LC) provides a global, transparent control and regulatory mechanism for protecting the marine environment from all sources of pollution. The regime promotes a balance between marine environment protection and measures intended to address climate change.

Governments, through the LP/LC, have taken steps to regulate carbon capture and storage beneath the seabed to mitigate the impacts of increasing concentrations of carbon dioxide (CO₂) in the atmosphere, and to regulate ocean fertilization and other marine geoengineering activities that have the potential for widespread, long-lasting or severe effects on the marine environment.

CARBON CAPTURE AND SEQUESTRATION IN THE SUB-SEABED

Carbon capture and storage (or “sequestration”) – known as CCS – is a climate change mitigation technique. In simple terms, CO₂ emissions are captured at source and then injected in carefully selected sub-seabed rock formations, typically a few kilometers below the sea floor. Depleted oil and gas fields, for example, can provide permanent storage for CO₂ waste. The technique may be appropriate for large single point CO₂ emission sources such as power stations, chemical and cement plants and steelworks.

THE LONDON PROTOCOL IS THE MOST ADVANCED INTERNATIONAL REGULATORY INSTRUMENT ADDRESSING CCS IN SUB-SEABED GEOLOGICAL FORMATIONS

LP – the legal basis

Since 2006, the LP has provided a basis in international environmental law to allow CO₂ storage beneath the seabed when it is safe to do so, and to regulate the injection of CO₂ waste streams into sub-seabed geological formations for permanent isolation.

By becoming a Party to the LP, Governments have a clear mechanism to assess proposals and issue licenses for CCS. This process is based on a mandatory impact assessment. And, to help this process, Parties have adopted a risk assessment and management framework as well as guidelines on how to assess whether CO₂ streams are suitable for this process, in sea areas under their own

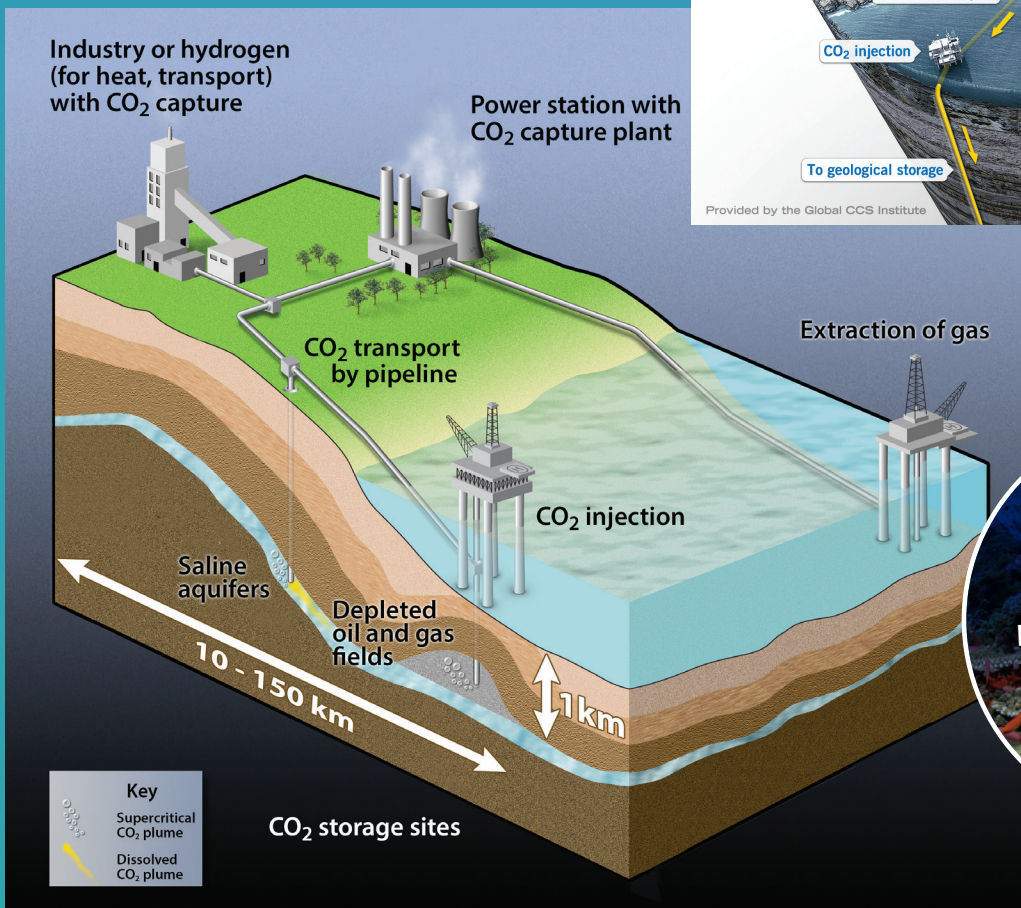
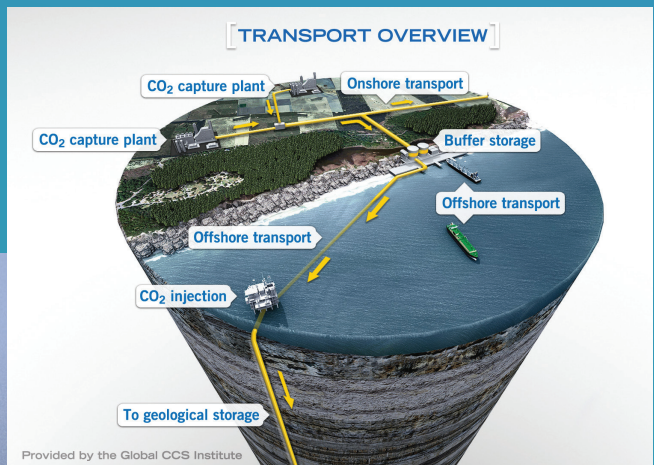
jurisdiction, without harming the marine environment. Long term monitoring requirements are included to help ensure the marine environment is protected from sub-seabed CCS in the centuries to come.

Exporting CO₂ streams for more efficient storage

The LP prohibits the export of wastes or other matter for dumping in the marine environment. However, in 2009, Parties to the LP agreed an amendment to allow sub-seabed geological formations for sequestration projects to be shared across national boundaries – effectively allowing CO₂ streams to be exported for CCS purposes (provided that the protection standards of all other LP requirements have been met).

Awaiting ratification, acceptance, approval, or accession

The CO₂ export amendment to the LP is not yet in force. It needs to be formally accepted by two-thirds of the Contracting Parties to the LP, and will come into force globally just 60 days later. New Parties acceding to, or ratifying, the LP can accept this amendment at the same time.



**DECISIVE ACTION
TAKEN BY LONDON
PROTOCOL PARTIES
BUT AMENDMENT
NOT YET IN FORCE**

Above: Scottish Carbon Capture & Storage (SCCS)

MARINE GEOENGINEERING AND OCEAN FERTILIZATION

The LP defines “marine geoengineering” as 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.”

Ocean fertilization is one such technique. It includes any activity undertaken by people with the principal intention of stimulating ocean primary production (increase in phytoplankton biomass).

Regulating research

In 2008, following concerns over commercial ocean fertilization activities, the Parties to the LP/LC adopted a further resolution that ocean fertilization activities other than legitimate scientific research should be considered contrary to the aims of both instruments, and should not be allowed.

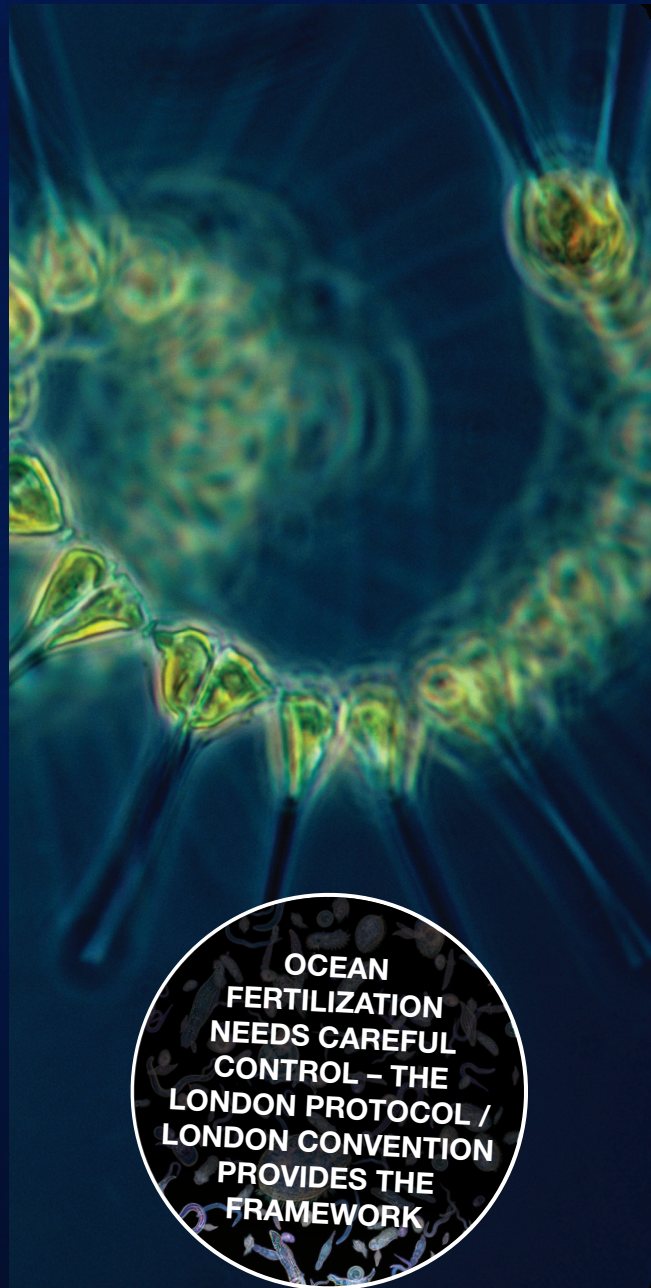
In 2010, LP/LC Parties adopted a resolution which provides detailed guidance on how to assess proposals for ocean fertilization research and how to complete an environmental assessment, including risk management and monitoring.

In 2013, the LP was amended to further regulate ocean fertilization. This will, when in force, provide a legally binding mechanism to regulate the placement of matter for ocean fertilization, while also “future-proofing” the LP to enable regulation of other marine geoengineering activities that fall within its scope and have the potential to cause widespread, long-lasting or severe impacts on the marine environment.

The LP provides a global, transparent and effective regulatory and control mechanism for ocean fertilization activities, and other activities that fall within its scope and that have the potential to cause harm to the marine environment.

Awaiting ratification, acceptance, approval, or accession

The amendments to regulate marine geoengineering under the LP are not yet in force and need to be formally accepted by two-thirds of the Contracting Parties to the LP.



**OCEAN
FERTILIZATION
NEEDS CAREFUL
CONTROL - THE
LONDON PROTOCOL /
LONDON CONVENTION
PROVIDES THE
FRAMEWORK**

THE LONDON PROTOCOL

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention) and the 1996 Protocol to the Convention (London Protocol), are two free-standing global treaties that have long been at the forefront of protecting the oceans from pollution caused by the disposal of wastes and other matter.

THE LONDON PROTOCOL IS ONE OF THE KEY PILLARS OF MARINE ENVIRONMENTAL PROTECTION

The London Protocol (LP) is the more modern and comprehensive of the two treaties. It provides a precautionary

framework for Parties to effectively prevent pollution of the sea caused by dumping or incineration at sea of wastes and other matter, and by activities including carbon capture and storage in sub-seabed geological formations and marine geoengineering activities, such as ocean fertilization.

The LP is one of the key pillars of marine environment protection together with the International Convention for the Prevention of Pollution from Ships (MARPOL), the United Nations Convention on the Law of the Sea (UNCLOS) and Regional Seas Conventions. The objectives of the LP include protecting and preserving the marine environment from all sources of pollution.

ACTION NEEDED

The LP/LC provides a policy framework to allow proposals for marine-based climate change mitigation technologies to be scientifically assessed. However, since the LC is no longer being amended, only the London Protocol can provide the full legal framework needed for a global regulatory and control mechanism to govern these issues, so that climate change mitigation activities do not compromise the marine environment.

Action is needed. Those countries not yet party to the LP need to ratify or accede to it; and those Contracting Parties that are yet to accept the LP climate change-related amendments need to accept them. This will help to ensure that sub-seabed carbon capture and storage will be used responsibly, and that potential environmental harm from ocean fertilization can be avoided while legitimate scientific research may continue. New Parties acceding to or ratifying the LP can accept the amendments at the same time.

Ratification and effective implementation of the London Protocol supports the global aspirations set in the 2030 Sustainable Development Agenda and helps countries deliver a number of the Sustainable Development Goals.



Contact the Office for the London Convention/Protocol and Ocean Affairs for information on:

- how to ratify the LP and its amendments
- how to move from the LC to the more modern and comprehensive LP
- the benefits of being a party to the LP
- how to assess proposals and requests for licenses to undertake ocean fertilization research

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