

# Carbon Dioxide Capture and Storage Offshore - International Legal Position

# Applicable Treaties

- **London Convention, 1972** (applies worldwide, at least 77 countries are contracting parties including all major OECD countries)
- **1996 Protocol to the LC** (would replace London Convention, not yet in force but has been ratified by 16 states including UK, Norway, Denmark)
- **OSPAR Convention** (entered into force in 1998, covers the North-East Atlantic)

# Underlying Objective of all Three Treaties

- “protect and preserve the marine environment from all sources of pollution” (1996 Protocol)
- “pledge themselves especially to take all practical steps to prevent pollution of the sea” (London Convention)
- “prevent and eliminate pollution” (OSPAR Convention)

# Carbon Dioxide Capture and Storage Options - Offshore

- R&D and demonstration projects
  - Enhanced oil recovery (EOR)
  - Enhanced gas recovery (EGR)
  - Injection into the water column
  - Injection into geological strata (the seabed)
- \* Legal position also depends on facilities used for placement - pipeline, ship, off-shore platform, etc.

# R&D and Demonstration are Permitted

“Dumping does not include placement of matter for a purpose other than mere disposal thereof, provided that such placement is not contrary to the aims of the Convention”  
(London Convention)

But how big a demonstration would be acceptable is open to question

# EOR and EGR are Permitted Under all Treaties

“Dumping does not include placement of matter for a purpose other than mere disposal thereof, provided that such placement is not contrary to the aims of the Convention”  
(London Convention)

OSPAR adds “provide that, if the placement is for a purpose other than that for which the matter was originally designed or constructed, it is in accordance with the relevant provisions of the Convention”

# Position on Storage Differs Between Treaties

# London Convention 1972 (1)

- Only applies to the water column
- Lists materials that are prohibited from dumping and those needing special care
- Since 1996 Industrial Waste dumping is prohibited
- Industrial Waste defined as “waste materials generated by industrial or processing operations”
- Includes a “reverse list” of industrial wastes that can be dumped

# London Convention 1972 (2)

- Nothing in the “Reverse list” can be claimed with confidence to include carbon dioxide. Nearest are:
  - uncontaminated inert geological materials the chemical constituents of which are unlikely to be released into the marine environment
  - uncontaminated organic materials of natural origin
- ***Unless one of these definitions covers carbon dioxide from combustion plant then disposal into the water column is banned under the London Convention***

# 1996 Protocol to the London Convention (1)

## **Tightens regulation by:**

- prohibiting dumping of all “wastes or other matter” except for those listed in Annex I
- Annex I includes the same list of permitted industrial wastes
- extended to cover “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”

# 1996 Protocol to the London Convention (2)

## The Protocol could prohibit geological storage unless:

- Annex I includes “inert, inorganic geological material” and “organic material of natural origin” - but unlikely that CO<sub>2</sub> could fall in either category
- Definition of “dumping” at “sea” excludes “sub-seabed repositories accessible only from land” - (i.e. land based sources) could a pipeline be considered to be only accessible from land?
- ***Without one of these exceptions the Protocol prohibits sub-sea storage***

# OSPAR Convention

## **Gives separate consideration to:**

- **Pollution from land based sources** (subject to strict authorisation and regulation)
- **Pollution from dumping or incineration** (incineration prohibited and dumping limited to listed substances none of which fit CO<sub>2</sub>)
- **Pollution from offshore sources** (dumping of waste from offshore installations is prohibited)

# OSPAR Convention - Definitions

- **Land based sources** (“includes any deliberate disposal under the seabed made accessible from land by tunnel, pipeline, or other means and sources associated with manmade structures placed, in the maritime area under the jurisdiction of the contracting party, other than for the purpose of offshore activities”)
- **Offshore sources** (“means any manmade structure, plant or vessel, ..., whether floating or fixed to the seabed, placed within the maritime area for the purpose of offshore activities”)

# OSPAR Convention

## **What is not prohibited**






















- Pipeline injection pure and simple
- Pipeline injection using a purpose built offshore structure

## **What is prohibited**

- Injection from an offshore installation
- Injection or dumping from a ship

\* No distinction between seabed and water column

# Summary

	<b>LC</b>	<b>Protocol</b>	<b>OSPAR</b>
<b>R&amp;D-Demonstration</b>			
<b>EOR/ EGR</b>			
<b>Placement in the water column from vessels</b>			
<b>Placement in the water column from offshore installations</b>			
<b>Pipeline injection into the seabed</b>			
<b>Pipeline injection using an existing offshore installation</b>			
<b>Pipeline injection with new offshore platform</b>			

# Conclusion (1)

- Treaties were not designed with CCS in mind
- May be a case for suggesting some amendments but this can only be done with large majority acceptance and will take time
- The aim of the treaties of protecting the marine environment must not be weakened by any changes
- Treaties prohibit certain activities, they do not permit activities

# Conclusion (2)

- Must keep with the overall objective of the treaties and only implement CCS in ways that do not endanger the marine environment
- Duties include:
  - apply a precautionary approach
  - activities subject to authorisation and regulation by competent bodies
  - provide system of regular monitoring and inspection

# Conclusion (3)

- With those activities that are not prohibited the treaties place a duty on the contracting party to protect the marine environment