Risk and Long-Term Liabilities of Subseabed Carbon Storage

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Background

- What is CCS?

- Why do we need CCS?
  - The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)
  - Should we consider CCS within the portfolio of measures to mitigate climate change?

- Why storing carbon streams under the subseabed?
  - Bottleneck of storage sites on land

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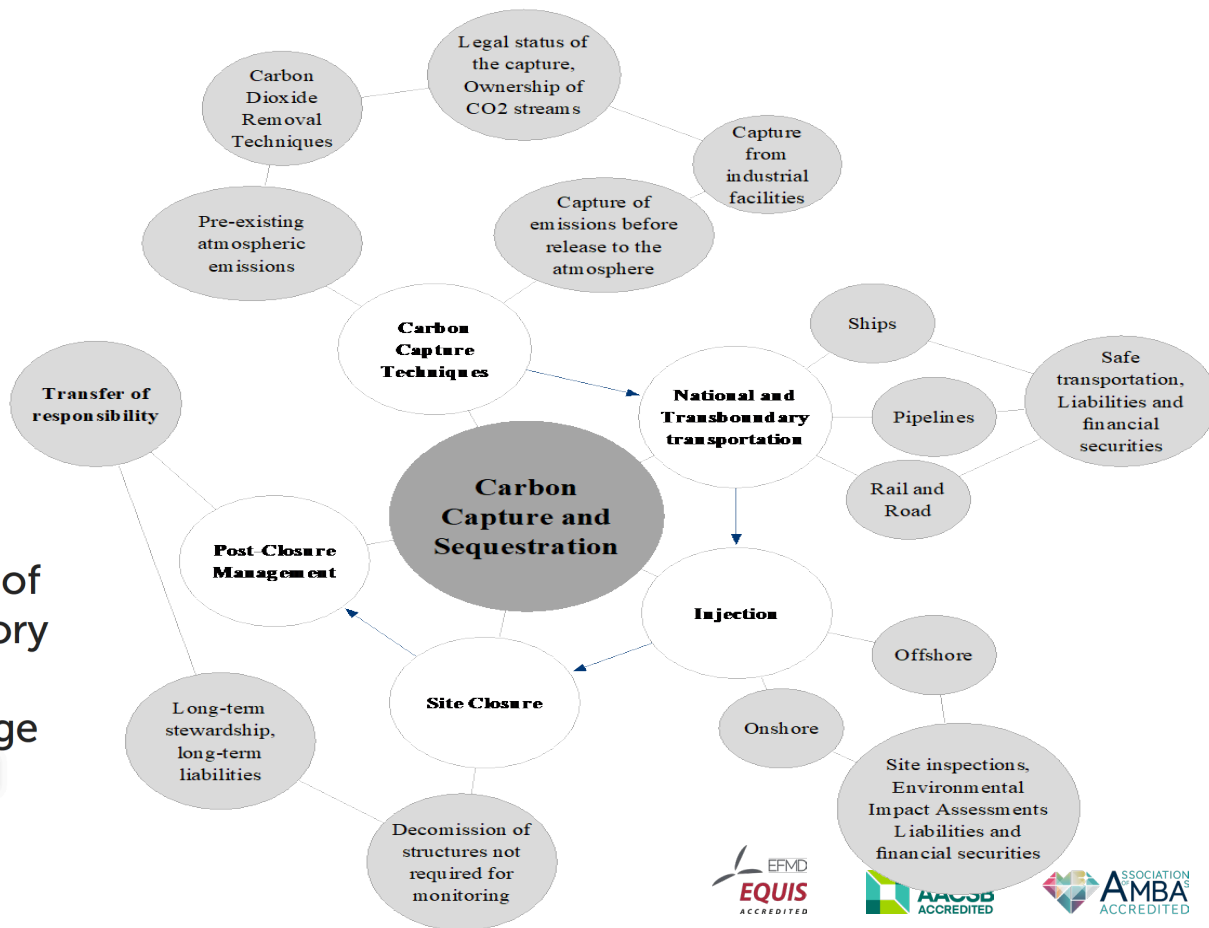SCHOOL OF BUSINESS, ECONOMICS AND LAW

CCS Stages

Image source:

Transboundary transportation of CO_2 streams by ships: regulatory barriers for scaling up carbon capture and sub-seabed storage
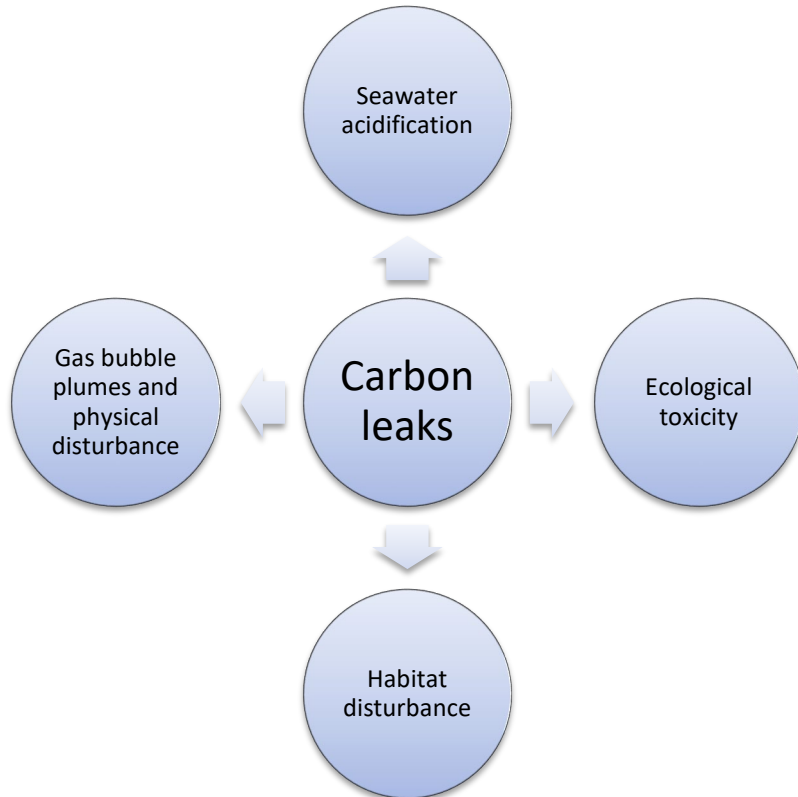
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https://www.frontiersin.org/articles/10.3389/fmars.2024.1429962/full

What are the risks of CCS at sea

These risks drive long-term liability rules

Operators must monitor for decades

financial security is required

Liability may transfer to the state only after strong evidence of containment

Marine conventions (OSPAR/HELCOM) insist on precaution and cooperation

From risks to liabilities

Liability for non-compliance of regulatory obligations
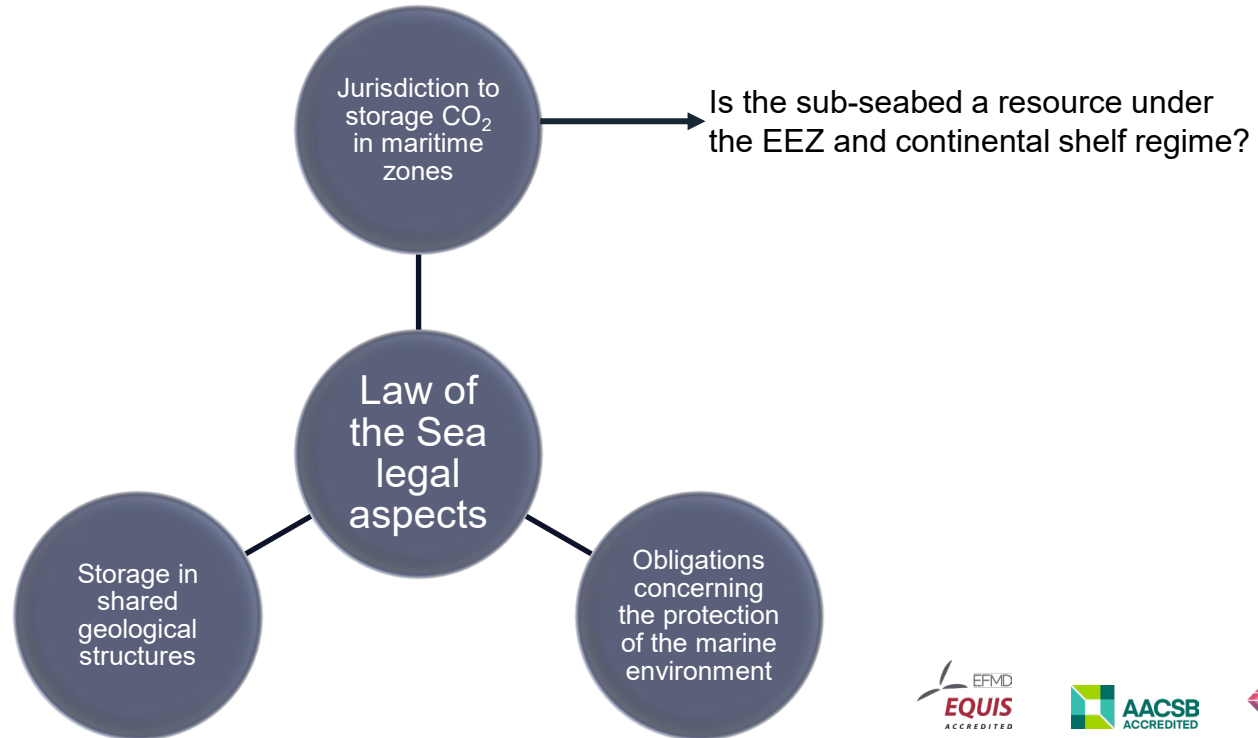
Climate liability

Environmental damage liability

Civil liability

State responsibility / transboundary harm

Jurisdiction to storage CO_2 in maritime zones

Is the sub-seabed a resource under the EEZ and continental shelf regime?

Law of the Sea legal aspects

Storage in shared geological structures

Obligations concerning the protection of the marine environment

DUMPING

Under the London Convention, CO_2 could be characterized as "industrial waste" under ANNEX 1

Amendment to the London Protocol	Content
2006 Amendment to Annex 1	Enables sub-seabed carbon dioxide storage. In force since February 2007
2009 Amendment to Article 6	Allows transboundary transportation of CO_2. Not in force
2019 Resolution of the Conference of the Parties	Provisional application of the 2009 amendment

Remember

Amendment of the London Protocol, allowing the export of carbon streams

Article 6 (2): … the export of carbon dioxide streams … may occur, provided that an agreement … has been entered into by the countries concerned…

According to the European Commission: Directives 2009/31/EC aand 2003/87/EC act as relevant arrangements in the meaning of Article 6(2) of the London Protocol

OSPAR

- In 2007, the Parties to the OSPAR Convention amended the treaty to authority the sub-seabed sequestration of carbon streams

- Lifecycle approach embedded

- OSPAR Guidelines & the FRAM framework

HELSINKI CONVENTION

The Baltic sea is a unique environment

- Semi-enclosed
- Ecologically fragile

Dumping is prohibited

- An amendment would be needed to allow for the storage of CO_2

The legal status of CO_2

- Waste?
- Injection beneath the seabed as a permitted use of the seabed

EU CCS Directive CCS Directive and the liability "handover" model (art 18)

- Regulates the entire lifecycle of a storage site

- The most distinctive feature of the CCS Directive is its mechanism for the transfer of responsibility after site closure.

- the CCS Directive does not eliminate long-term liability, but rather reallocates it.

What exactly transfers at EU level after responsibility is handed over?

EU Environmental Liability Directive (ELD)

- CCS-specific rules do not replace EU general environmental legislation, but operate alongside them

Takeaways: Three lines of defence for long-term liability in sub-seabed CCS

International permissibility and minimum safeguards

Regional marine environmental treaties

EU CCS Directive

Thank you