

HERCCULES

full CCUS chain demonstration

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**Regulatory aspects:
Obstacles/barriers to overcome**

Ingvild Ombudstvedt and Lena Wammer Østgaard/
IOM Law



CCUS ZEN is exploring the potential for accelerating deployment of CCUS in two regions with lower maturity level for CCUS compared to the current development in the North Sea region: Baltic Sea Region and Mediterranean Sea Region.

WP1 - Mapping of technical aspects and infrastructure needs

Lead: SINTEF

WP2 - Mapping of non-technical aspects and stakeholder needs

Lead: Perspectives Climate Research

WP3 - CCUS value chain scenarios

Lead: Tallinn University of Technology

WP4 - Development of CCUS value chains and local business models

Lead: Technip Energies

WP5 - Knowledge-sharing, communication and dissemination

Lead: University of Edinburgh

WP6 - Project management and administration

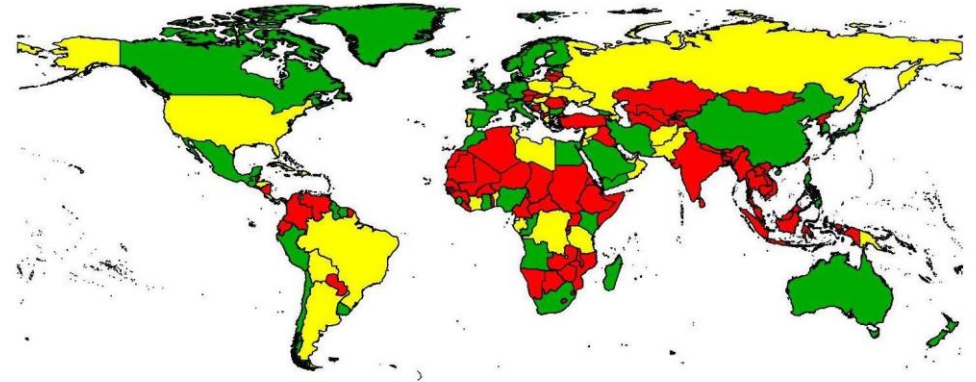
Lead: SINTEF



London Protocol



- Supersedes the London Convention and will eventually replace it.
- Protects the marine environment from pollution caused by dumping.
- Article 6.2 prohibits export of wastes and other matter for dumping or incineration at sea.
- 2009 amendment: new article 6.2, exempts CO₂ exported for the purpose of storage from the prohibition.
- 2019 resolution: interim solution of provisional application.





- New art. 6.2 contains criteria that must be met before export can occur and mandates the conclusion of an arrangement or agreement.
- The arrangement or agreement shall, inter alia, confirm and allocate permitting responsibilities between the parties involved consistent with the provisions of the Protocol and other applicable international law.
- Introduces a due-diligence obligation for Contracting Parties seeking to export CO₂ to a non-Contracting Party.
- Reminder: the London Protocol only applies to the offshore storage of CO₂ and has no bearing on onshore storage.



London Protocol: Baltic Sea Region



	Contracting Party	Acceptance of 2009 amendment	Deposited declaration of provisional application
Estonia	X	X	
Latvia			
Lithuania			
Poland			
Denmark	X	X	X
Sweden	X	X	X
Germany	X	Underway	
Finland	X	X	



Helsinki Convention



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Helsinki Convention



- Seeks to protect the Baltic sea from pollution from air, sea and land, through e.g. prohibition against dumping.
- Contracting Parties: Denmark, Estonia, the European Union, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden.
- The Convention covers the whole of the Baltic Sea area, including inland waters.
- The Convention is amended whenever deemed necessary, such as to follow the developments in international environmental and maritime laws.





Article 2, «pollution» is defined as:

introduction by man, directly or indirectly, of substances or energy into the sea [...] which are liable to create hazards to human health, to harm living resources and marine ecosystems, to cause hindrance to legitimate uses of the sea including fishing, to impair the quality for use of sea water, and to lead to a reduction of amenities.





Article 4 (a), «dumping» is defined as

- i) any deliberate disposal at sea or into the seabed of wastes or other matter from ships, other man-made structures at sea or aircraft;
 - ii) any deliberate disposal at sea of ships, other man-made structures at sea or aircraft;
- Consensus that storage of CO₂ falls within the definition of dumping.
 - The Helsinki Convention applies to the seabed and its subsoil.





- Article 11 prohibits dumping in the Baltic Sea Area.
- It provides one exception to the ban: dredged material.
 - Subject to a prior special permit issued in accordance with Annex V.
- CO₂ is not listed as an exception and storage is therefore prohibited.
- An amendment is likely to be needed to allow for the storage of CO₂.

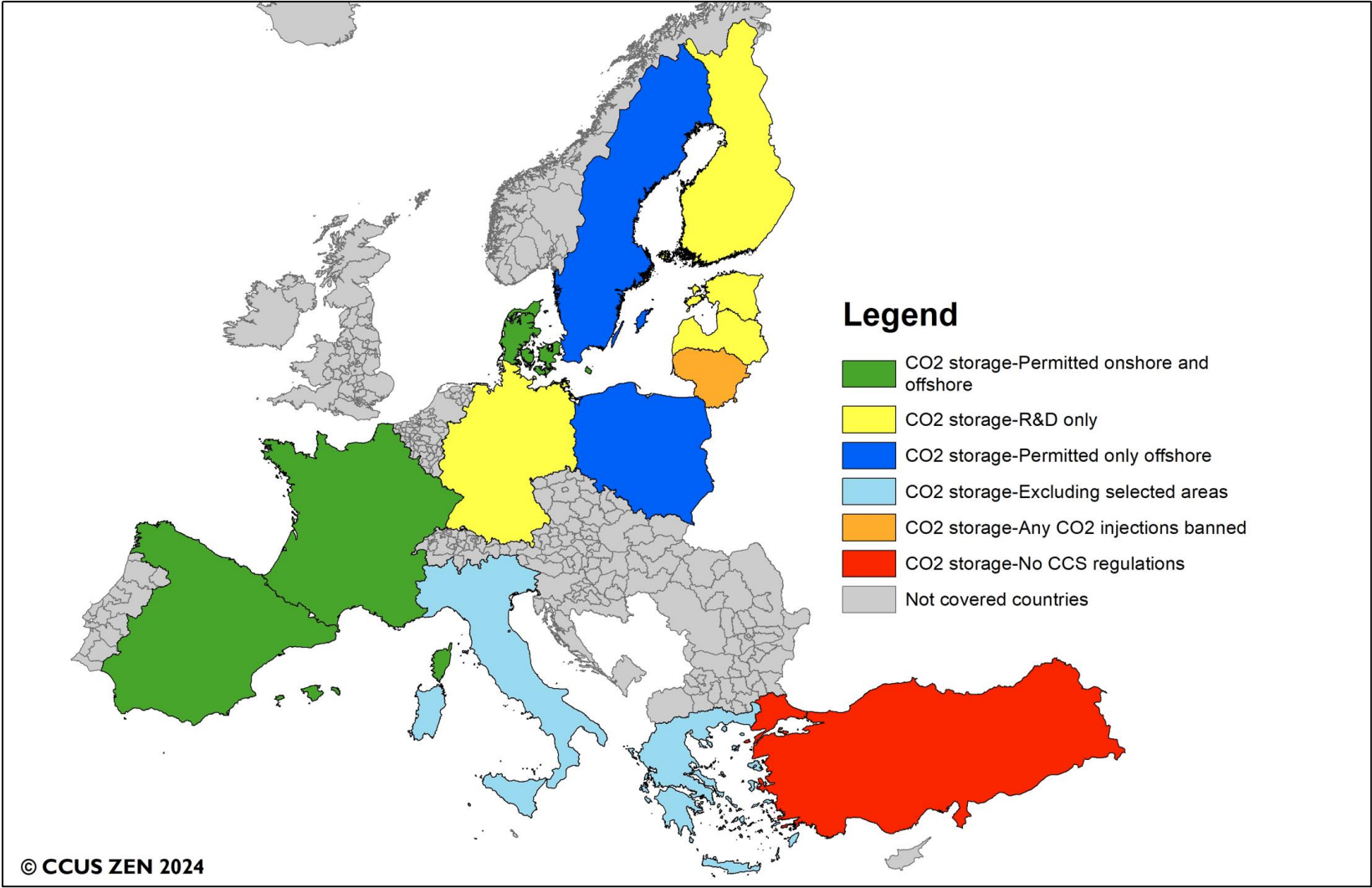




- Creates a legal framework for the environmentally safe geological storage of CO₂ to contribute to the fight against climate change (Art. 1).
- Applies to both onshore and offshore storage exceeding 100 kilotonnes (Art.2).
- Does not require Member States to store CO₂ in their territories, but if the Member States open up for storage, the provisions of the CCS Directive are mandatory (Art. 4).
- The Directive is transposed in all the EU and EEA countries.
- The Directive is conceived to be in compliance with the London Protocol.
- Not all Member States are Contracting Parties to the London Protocol.



National implementation of the CCS Directive





- **Poland:**
- Ongoing revision.
 - Storage is only permitted in the Cambrian reservoir (and the surrounding area) under the current framework and only demonstration projects were allowed. Changes have been made to facilitate commercial scale projects and they are looking into opening more areas for storage.
 - A licence for prospecting/exploring an underground storage complex is no longer required. Instead, you will need an approved geological works plan for such activities. Simpler exercise for the operator.
- **Latvia:**
- New Climate Law (will replace the Law on Pollution which prohibits storage of CO₂).
 - However, the ban on the storage of CO₂ stays in place awaiting more research.
- **Lithuania:** storage is prohibited.
- **Estonia:** storage is prohibited. R&D only. Has accepted 2009 Amedment to the London Protocol.





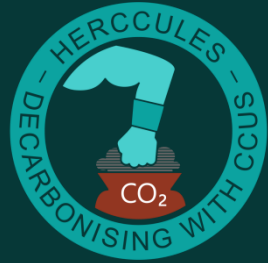
- **Germany:**
- Upcoming carbon management strategy, which is expected to provide greater clarity as to the intended role of CCS and CCU and carbon removal. The Carbon Dioxide Storage Act is being amended, and a Bill was presented earlier this year.
 - Offshore storage sites will be explored.
 - Looking to enable border transportation under the London Protocol.
- **Denmark:**
- Storage is allowed onshore and offshore without limitations. Developing a regulatory framework for onshore storage.
- **Finland:** storage is prohibited. R&D only.
- **Sweden:** storage is permitted offshore.





- There are no barriers left under the London Protocol for the export and storage of CO₂.
- Currently, offshore storage in the Baltic Sea is prohibited (Helsinki Convention art. 11).
 - As such, onshore storage or export is the only option for countries in this region as of today.
- Most countries in the Baltic Sea Region have transposed the CCS Directive (all EU countries).
 - Transposition does not equal identical frameworks or permissibility for storing CO₂.
- There are positive regulatory developments in the Baltic region to facilitate and deploy CCS.





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> GRAZIE PER L'ATTENZIONE

➤ THANKS FOR YOUR ATTENTION

Ingvild Ombudstvedt

iom@iomlaw.no

+47 468 64 221