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The International 'CTI' Project on CO_2 ocean sequestration: lessons for mCDR?

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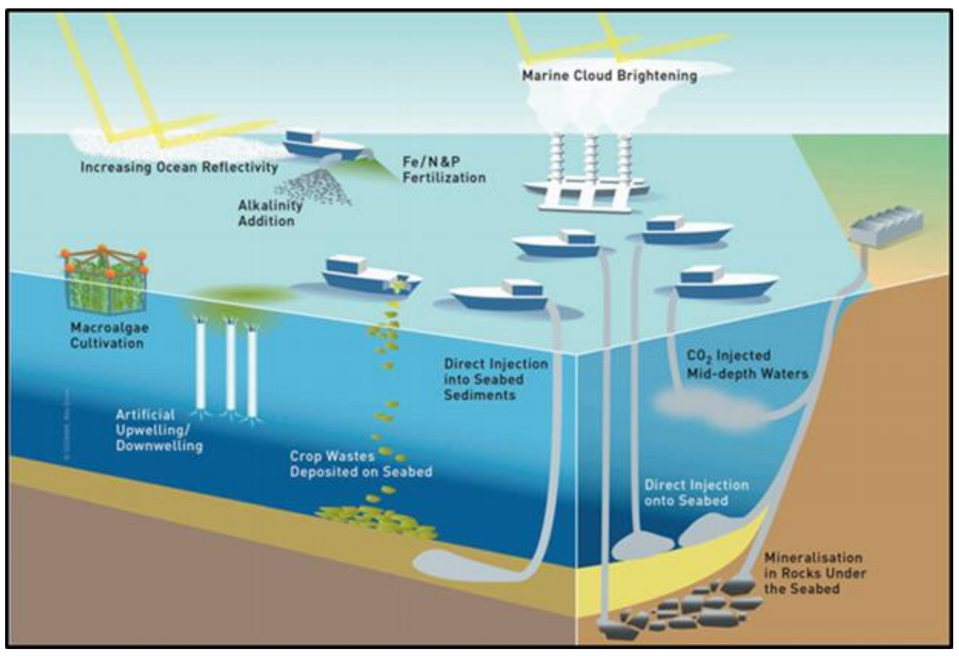
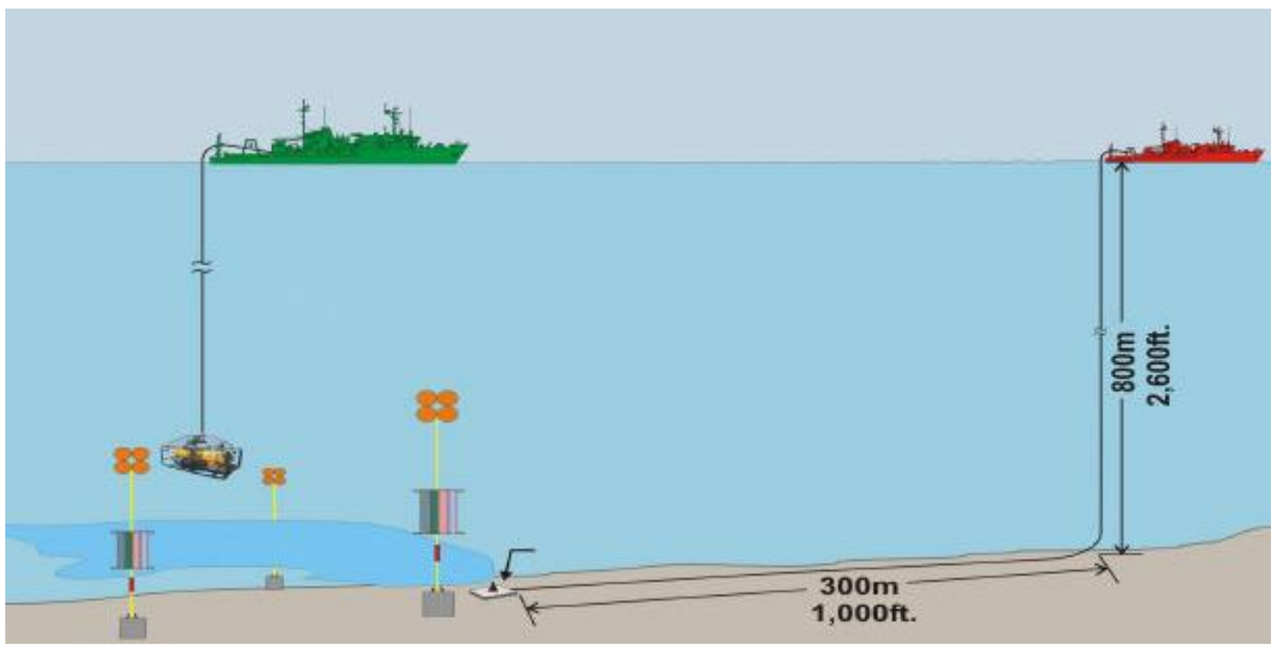
This presentation is about a small-scale, international scientific experiment planned to study direct ocean CO_2 storage at mid-depth in the ocean in 2001-2002. The experiment was stopped in the last minute by the Norwegian Minister of Environment claiming that allowing the experiment would have signalled intent to eventually allow large scale implementation.

Can this happen to mCDR experiments 25 years later?



Options for ocean sequestration of CO_2 including middepth direct ocean injection (GESAMP, 2019)

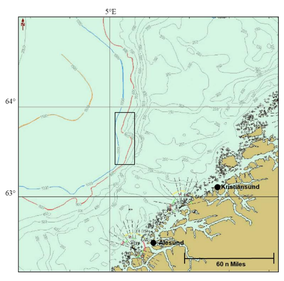


Proposed experimental discharge and environmental monitoring. ROVs were o be operated both from the research vessel and the supply vessel.

mCDR today:

Direct injection at middepth or for storage on the seafloor is now forbidden but:

- **The legal instruments discussed for mCDR today are very similar to those discussed 25 year ago for direct ocean injection: London Convention and Protocol, OSPAR, UNFCCC, IMO.**
- **There are very good reasons for creating stringent regulations for mCDR to avoid unintentional harm.**
- **The statement by the minister in 2002 could well be made today concerning mCDR.**



Planned release of 5,4 tons of pure CO_2 from the ocean floor at a depth of 800 m in the Norwegian Sea in 2002. Approved by the Norwegian Environment Agency but permit withdrawn by Minister of Environment

Press release July 2002:

"Environment Minister Børge Brende will not agree to an experimental project with release of CO_2 in the Norwegian Sea at this time. – A possible future use of the sea as a storage place for CO_2 is controversial. Such deposits may be in conflict with today's international rules related to protection of the marine environment, and the Ministry of the Environment must therefore turn down the application, says Environment Minister Børge Brende."

The question remains also for mCDR today -
How to learn about impacts if scientific experiments are not going to be allowed?

How to proceed?

- **Use BBNJ as a vehicle for creating common requirements for Environmental Impact Assessments?**
- **Create broad consortia of leading global ocean science institutions to take responsibility for experiments? (But the 2002 group was not bad)**

Reflections? Contact Peter.Haugan@hi.no

The «International project on CO_2 ocean sequestration» was a Climate Technology Initiative Kyoto Protocol project that ran 1997-2002.

The applicant for the release was NIVA, the Norwegian institute for water research, on behalf of an international scientific group that consisted of

- AIST, National Institute of Advanced Industrial Science and Technology, Japan
- CRIEPI, Central Research Institute of Electric Power Industry, Japan
- CSIRO, Commonwealth Scientific and Industrial Research Organisation, Australia
- HPU, Hawaii Pacific University, USA
- IOS, Institute of Ocean Sciences, Canada
- KU, Kyoto University, Japan
- MIT, Massachusetts institute of Technology, USA
- NERSC, Nansen Environmental and Remote Sensing Center, Norway
- NIVA, the Norwegian institute for water research, Norway
- PICHTR, Pacific International Center for High Technology Research, USA
- RITE, Research Institute of Innovative Technology for the Earth, Japan
- UH, University of Hawaii, USA
- UoB, University of Bergen, Norway