

Pressemitteilung

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Assessing the environmental risks of sub-seabed CO₂ storage – EU-project led by IFM-GEOMAR started –

20.05.2011/Kiel. The European Union (EU) funded project ECO₂ to evaluate the potential impact of sub-seabed carbon dioxide (CO₂) leakage from storage sites on marine ecosystems has now been launched. 27 project partners from nine nations will study existing sub-seabed storage sites in the Norwegian North Sea and the Barents Sea as well as natural seeps at the seafloor to assess the safety of storage sites and the impact of potential CO₂ leakage on the marine ecosystem. The project is coordinated at Kiel, Germany by the Leibniz Institute for Marine Sciences (IFM-GEOMAR).

The capture of CO₂ and its subsurface storage (CCS, Carbon Dioxide Capture and Storage) may help to reduce CO₂ emissions at power plants and industrial facilities. The European Commission (EC) considers CCS as a potentially important technology for the reduction of greenhouse gas emissions and the mitigation of climate change. Since several European states (U.K., Norway, Netherlands, Italy) aim to store CO₂ below the seabed, more work needs to be done to evaluate the safety of these sub-seabed storage sites. The EU has thus allocated €10.5 Mio. to the ECO₂ project to evaluate the likelihood of leakage, the possible impacts on marine ecosystems, and the potential economic and legal consequences of leakage from sub-seabed storage sites.

Potential risks of sub-seabed CO₂ storage will be assessed comprehensively by a large team of geologists, biologists, chemists, economists, lawyers and social scientists from leading academic institutions and private companies. After four years they will provide not only a comprehensive risk assessment but also guidelines for monitoring and a best environmental practice guide for preparation and management of storage sites. To meet these requirements the scientists will study the two existing Norwegian offshore CO₂ storage sites *Sleipner* and *Snøhvit* as well as the *B3 field* in the Polish Baltic Sea, which could potentially be used as a storage site. They will reassess whether or not gas is being released at these sites, how it could be transported through the different strata of the seafloor and the water column, and which reactions are involved. Comparative data will be obtained at natural CO₂ seeps off Italy (Panarea), Japan (Okinawa Trough), Germany (Salt dome Juist), and Norway (Jan Mayen). Advanced instrumentation for monitoring of storage sites will be tested in the field during more than a dozen research cruises. The likelihood of leakage and the impact on marine organisms and ecosystems will be evaluated not only in the field but also by laboratory experiments and numerical modelling.

A dedicated working group will study how the public is responding to offshore CO₂ storage projects. The project results will be continually communicated to the general public and a stakeholder dialogue will be implemented with representatives from environmental NGO's, EU administrations, and operators of CCS projects. The first expeditions will already be conducted during spring and summer 2011 to monitor the seafloor and evaluate the safety of the storage sites located in the North Sea and Barents Sea.

Links:

Webpage of the ECO₂ project: www.eco2-project.eu

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