CLIMIT project no 616058

CO_2 Storage Data Consortium

Accelerating CCS deployment by sharing reference datasets from CO_2 storage projects

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Motivation

CO_2 Storage Data Consortium (CSDC) is a new international collaboration for sharing reference datasets from CO_2 storage projects such as Sleipner, Snøhvit and the Illinois Basin—Decatur project (IBDP). The goal is to increase efficiency of building capacity, confidence and competence in CO_2 storage.

CSDC is an open, international network developing a common platform for sharing datasets from pioneering CO_2 storage projects. It is focused on CO_2 storage datasets designed to **accelerate learning, build capacity, reduce costs, and minimize uncertainties**. CSDC promotes sharing of datasets on site geology, well data, geophysical monitoring data, and reservoir data and models. Access to properly curated and well-understood datasets can accelerate new development of site characterization methods, reservoir simulation, and monitoring technologies. Use of common datasets will be beneficial for comparing similar methods, encourages complementary research based on alternative methods and stimulates international collaboration.

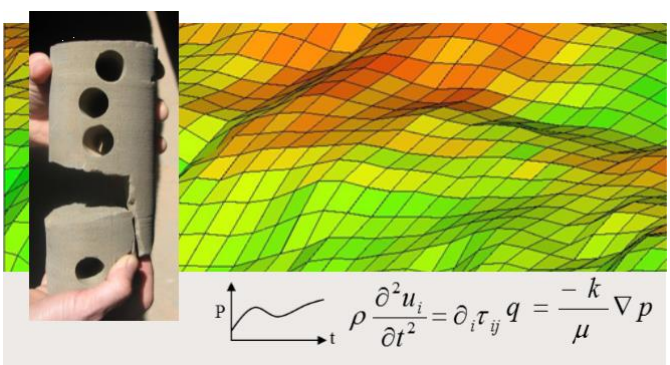
Sharing CO_2 storage datasets

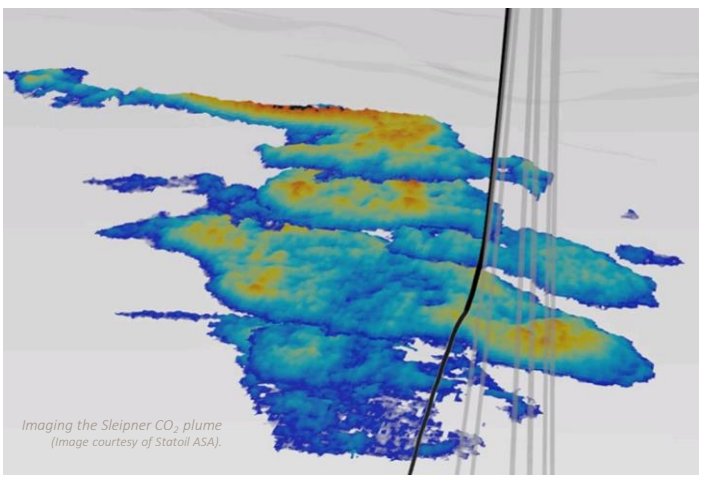
The idea of CSDC emerged between US-Norway researchers during 2015 and the ambition is to expand with new participants and more countries. **CSDC underpins the CSLF Large-Scale Saline Storage Project Network** proposed to leverage international saline storage projects that can share best practices, operational experience, and lessons learned to advance CCS deployment [1].

The first datasets proposed to be shared are relevant for advancing knowledge and technology essential for operating and monitoring CO_2 storage facilities [2]:

- **Injection well datasets** (Sleipner, IBDP),
- **CO_2 flow modelling datasets** (Sleipner),
- **Geomechanical response datasets** (In Salah, IBDP).

The consortium will manage the datasets, administrate the access, and facilitate dissemination. Datasets will be subject to terms of use and proper acknowledgements.




Imaging the Sleipner CO_2 plume (Image courtesy of Statoil ASA).

Understanding user needs

Participants in CSDC may be **users, data providers, sponsors, or observers.** For data providers the consortium can reduce costs and simplify procedures when sharing CO_2 storage data. In the longer run, an improved basis for high quality research can result in new knowledge and technology valuable to the data owners.

No research funds will be offered by the consortium, which will only cover management of the datasets. However, international workshops focused around use of datasets and improved understanding of key CO_2-storage uncertainties will be encouraged. A **survey conducted among 50 potential data users and providers** helps determining how the consortium can move forward.

Timeline for CO_2 Storage Data Consortium

CSDC was launched at GHGT-13 in Lausanne, November 2016. A specification of basic requirements is underway and alternative platforms for data sharing are evaluated. In June 2017, the consortium will recommend a technical solution for international data sharing and present a plan to enable the long-term operation of the service. If funding is secured the first datasets can be available through CSDC late 2017 or early 2018.

References:
[1] Carbon Sequestration Leadership Forum – CSLF, 2015: *Secretary Moniz Announces New CO_2 Storage Network at Multinational Carbon Sequestration Forum* https://energy.gov/fe/articles/secretary-moniz-announces-new-co2-storage-network-multinational-carbon-sequestration
[2] P. Ringrose, S. Greenberg, S. Whittaker, B. Nazarion, V. Oye (2017): *Building confidence in CO_2 storage using reference datasets from demonstration projects.* Energy Procedia, 2017.

Acknowledgements:
This poster is produced with support from CLIMIT, as part of project **616058 CO_2 Storage Data Consortium**. In addition to CLIMIT, the authors acknowledge contributions from Statoil, University of Illinois, US DOE, IEAGHG and NCCS.