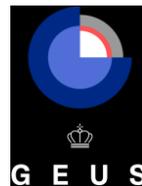


New seismic acquisition for CO₂ storage

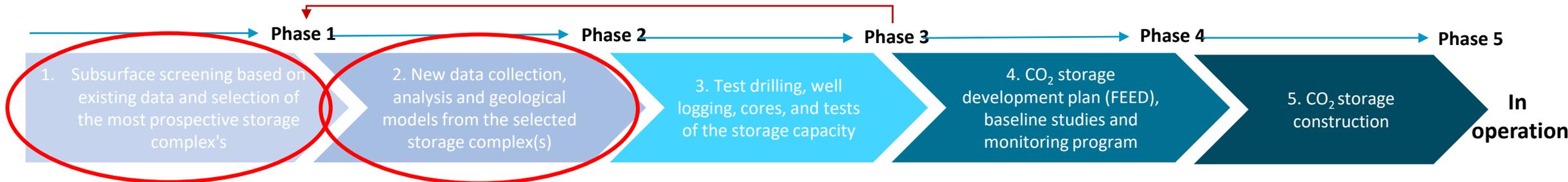
Data availability

Nina Skaarup, State Geologist



Development phases for a geological subsurface CO₂ Storage

The selected site is considered suitable/unsuitable for CO₂ storage



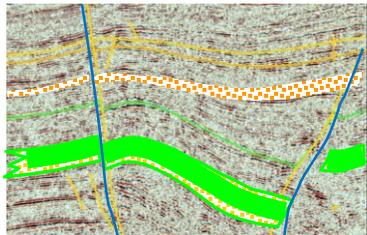
Interpretation of seismic data
Mapping of reservoir and seal
Storage capacity calculations
Core descriptions
Borehole log interpretation
Geological model (vs.0)
Simulation of CO₂ injection (vs.0)
Analog studies

Collection of new seismic data
Interpretation of new seismic data
Seal capacity ratings
Geological model (vs.1)
3D model of the storage complex (vs.1)
Simulation of CO₂ injection (vs.1)
Risk factors

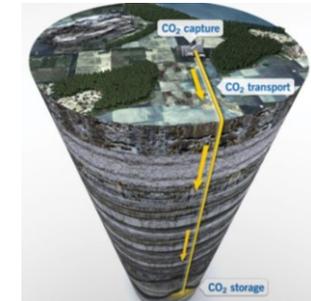
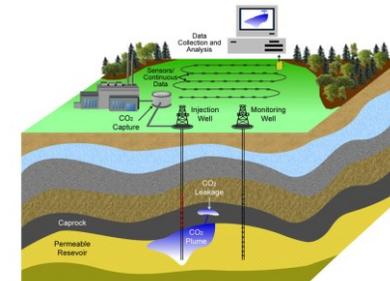
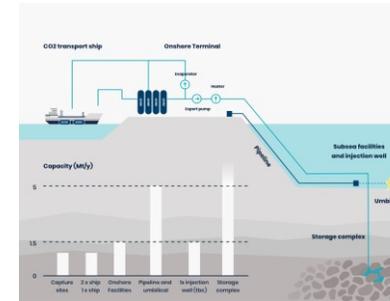
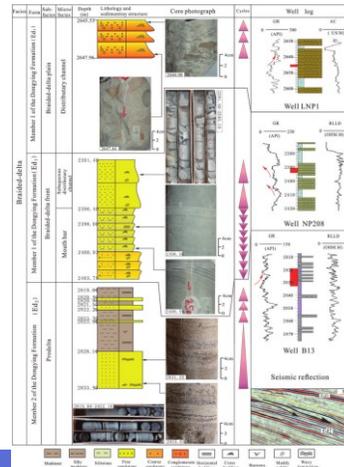
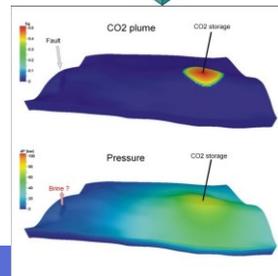
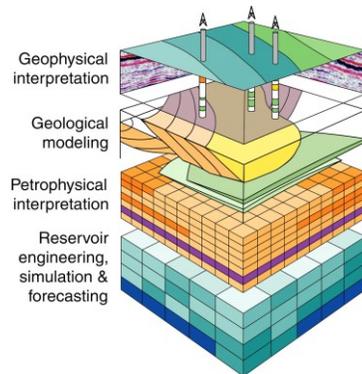
New core descriptions
New log interpretations
Seal capacity analysis
Analysis of reservoir properties
Injection test
Risk factors
3D model of the storage complex (vs.2)
Simulation of CO₂ injection (vs.2)

Determination of concept
3D model of the storage complex (vs.3)
Simulation of CO₂ injection (vs.3)
Uncertainty analysis
Baseline measurements
Determination of monitoring program

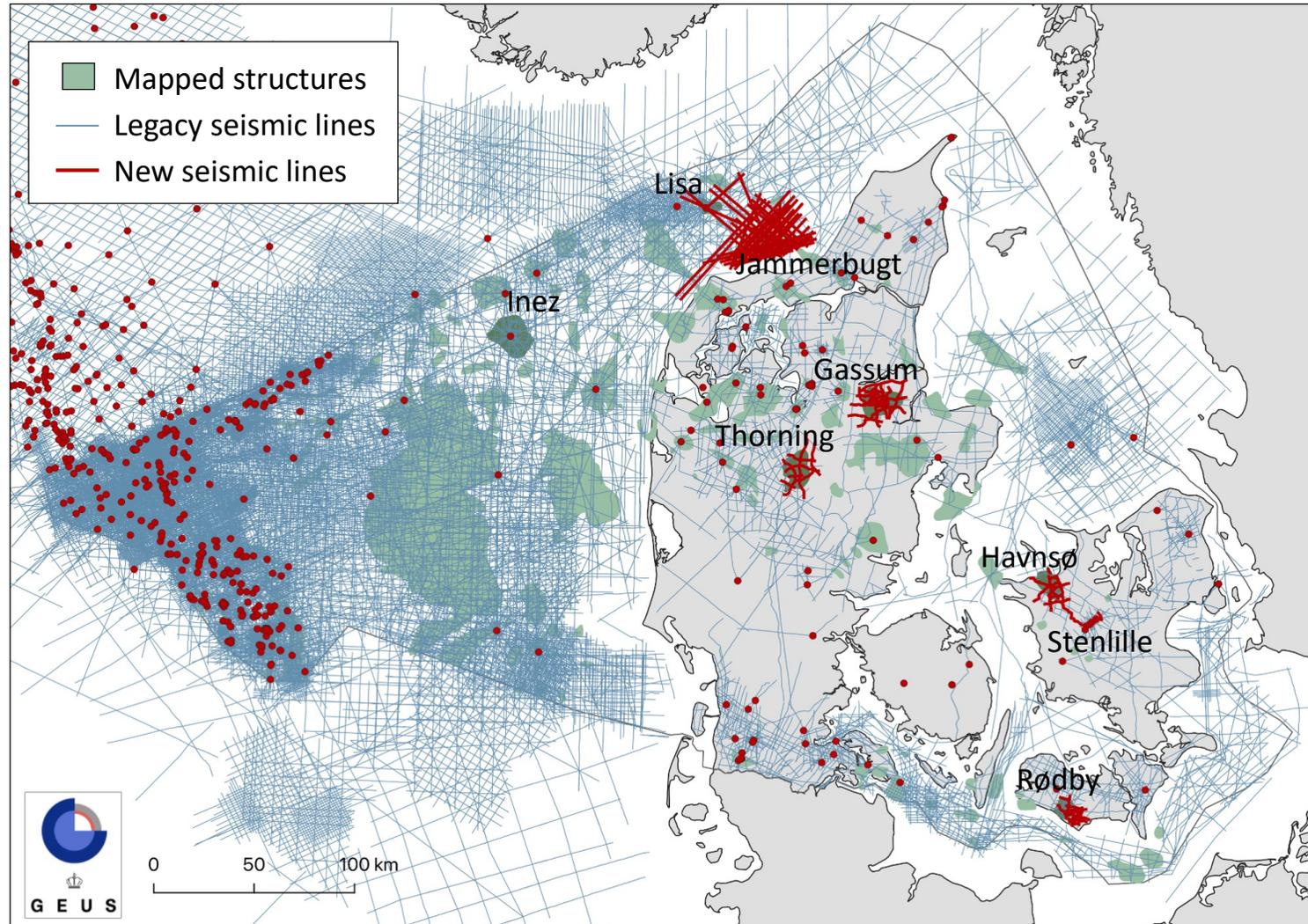
Establishment of injection well
Establishment of relief well(s)
Surface facilities
Establishment of monitoring



Stenlille-1



Data acquisition



Stenlille – February 2022

Havnsø – August-October 2022

Gassum – February-May 2023

Jammerbugt – April 2023

Rødby – June-July 2023

Thorning – August-October 2023

(No new data for Lisa and Inez)

Seismic Data Acquisition



Reporting

Stenlille:

- Final reporting
- Legacy and new data ready for download
- Interpretation grids ready for download

Havnsø:

- Final reporting
- Legacy and new data ready for download
- Interpretation grids ready for download

Gassum:

- Legacy and new data, and interpretation grids ready for download later this week.
- Final reporting May 2024

Rødby:

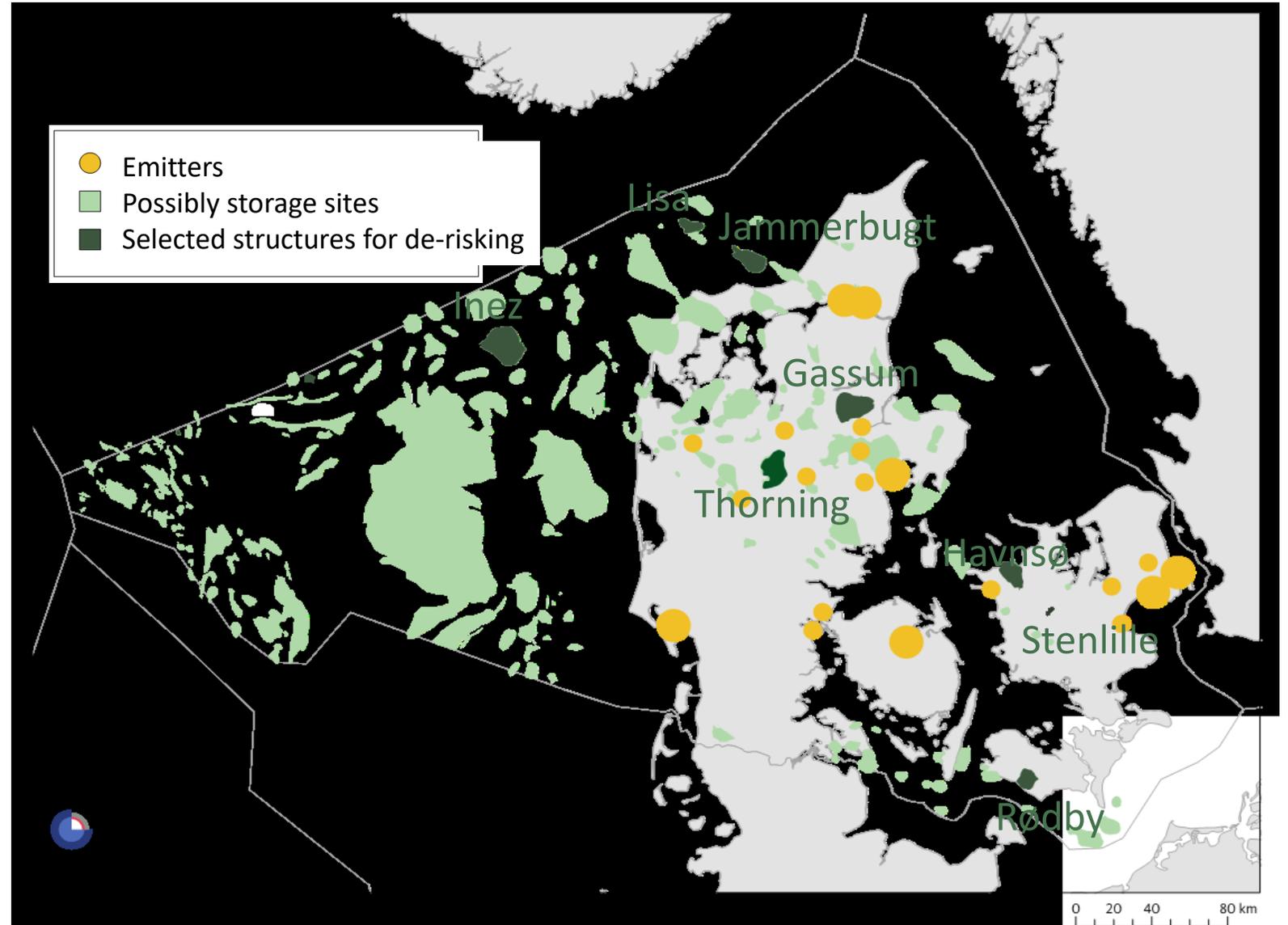
- Legacy and new data ready for download
- Interpretation grids ready for download
- Final reporting April 2024

Thorning:

- Legacy data ready for download
- Raw data from the new acquisition ready
- Final reporting Sept 2024

Jammerbugt:

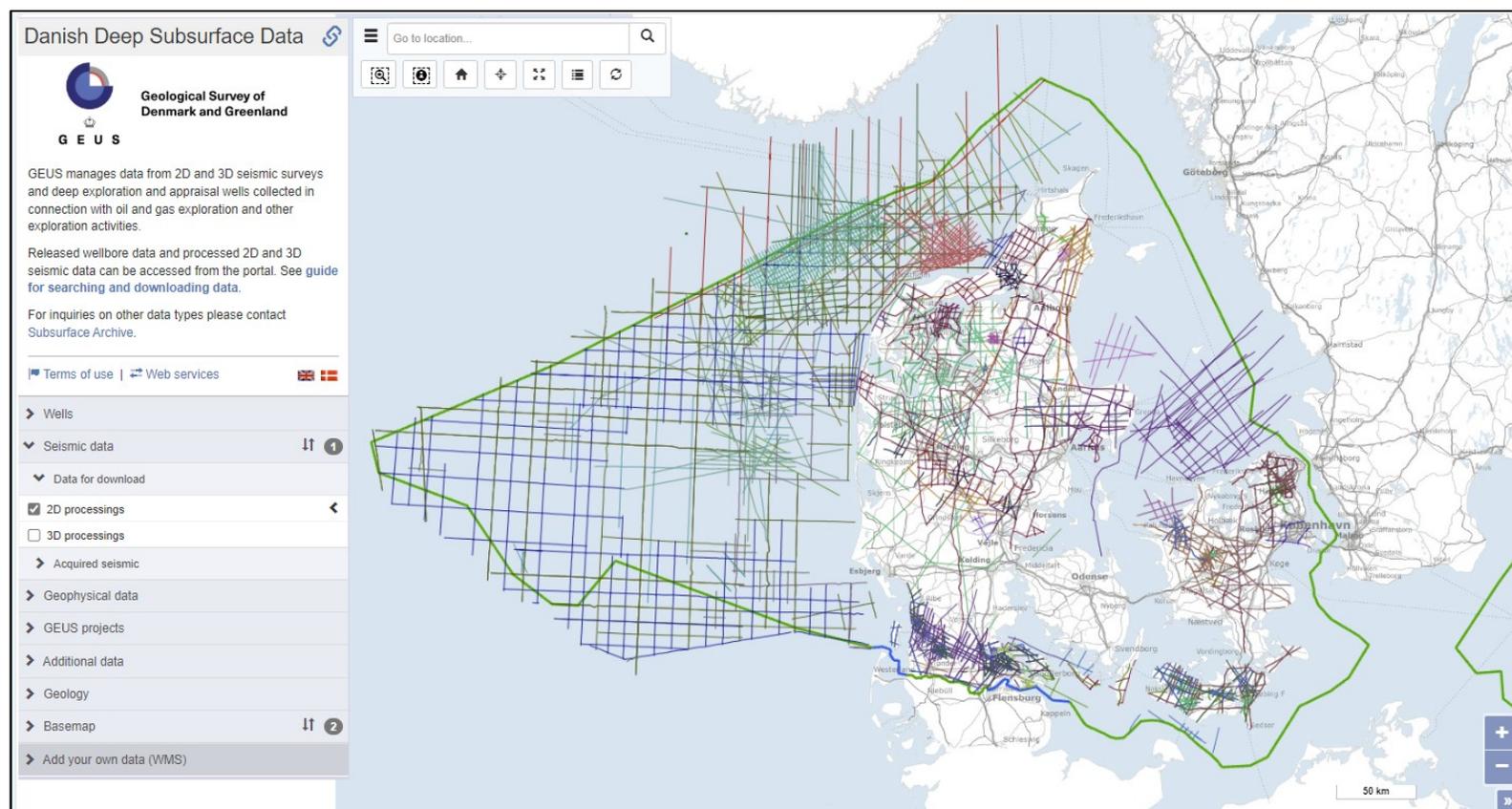
- Legacy and first version processed data ready for download
- Reprocessed new data, early 2024
- Final reporting Jan 2024



<https://www.geus.dk/produkter-ydelser-og-faciliteter/data-og-kort/ccs-data-2022-2024>

Data

- All new processed data will be for free download
- All new raw seismic data will be available for a handling fee
- All legacy 2D and 3D seismic data and deep wells for the whole Danish area will be available for free download during 2024



<https://www.geus.dk/produkter-ydelser-og-faciliteter/data-og-kort/ccs-data-2022-2024>

Outreach

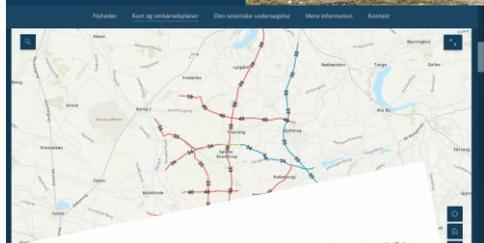
- Citizen meetings prior to acquisition (GEUS, ENS, COWI)
- Citizen meetings on strategic environmental assessment (ENS, GEUS, RAMBØL)
- Visitor's days
- Survey web page and hotline
- Information letters and flyers
- Interviews in tv/newspapers
- Talks for schools and the public
- Social media



En 200 meter lang mikrofon lytter efter en klimaløsning under jorden

Et bredt politisk forlig har påtænkt, at der skal være CO₂-lager i den danske undergrunden. Nu har Geus gode resultater.

INCULCARE HØR
Under arbejdet med at påvise muligheden for at lagre CO₂ i undergrunden, er der blevet installeret en 200 meter lang mikrofon i jorden. Mikrofonen lytter efter signaler, der kan tyde på, at CO₂ er på vej ned i jorden. Det er et vigtigt skridt i arbejdet med at sikre, at CO₂-lagringen er sikker og effektiv.



Snart vil jorden måske vibrere i din baghave
Snart vil to minilastbiler sende vibrationer ned i undergrunden i den nordvestlige del af Silkeborg for at undersøge, om området er egnet til et CO₂-lager.



Samme undersøgelse af i gang i Gassum udenfor Randers. Lastbilerne sender lydbølger 1500 meter ned i jorden.



Geus og COWI

HOTLINE 41 76 51 93
Kontakt COWI's hotline på telefon 41 76 51 93 eller af brev på info@cowi.com, hvor vores medarbejdere svarer på dine spørgsmål vedrørende de seismiske undersøgelser.

Seismisk undersøgelse
I august-oktober 2023 gennemføres en seismisk undersøgelse i området mellem Kallundborg, Holbæk og Sorø.

Det foreslås at vejene i området med to minilastbiler der sender vibrationer, som optages af geofoner (mikrofoner) lagt på jorden. Undersøgelsen skal give mere viden om de dybere geologiske strukturer, der undergrunden her forventes at være egnet til lagring af CO₂.

YDERLIGERE INFORMATIONER
Under arbejdet med at påvise muligheden for at lagre CO₂ i undergrunden, er der blevet installeret en 200 meter lang mikrofon i jorden. Mikrofonen lytter efter signaler, der kan tyde på, at CO₂ er på vej ned i jorden. Det er et vigtigt skridt i arbejdet med at sikre, at CO₂-lagringen er sikker og effektiv.

QR Code

