

# Methods and capacity for carbon storage

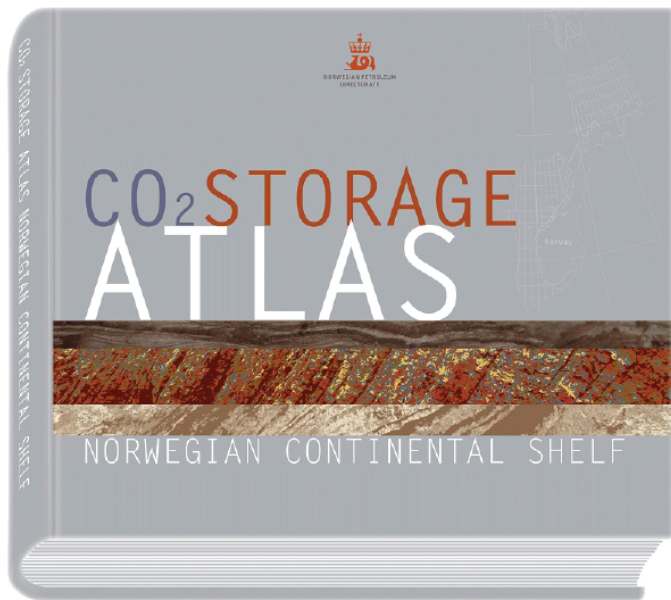
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Department of Physics and Technology



| p h y s i c a l e x p e r i m e n t || n u m e r i c a l s i m u l a t i o n |

# Storage capacity Norwegian Continental Shelf



86.24 Gt

**1763 years** of national 2022-emissions  
(**48.9 Mt**)

What  
happens  
in  
the subsurface...

... and is it **safe**?

i d e a  
t h e

THE FLUIDFLOWER CONCEPT



C O N N E C T I N G  
T H E

• R E S E A R C H • I N N O V A T I O N • D I S S E M I N A T I O N • S T E M R E C R U I T M E N T  
D O T S

# What is a FluidFlower?

An accessible and immersive carbon storage experience



w h a t c a r b o n s t o r a g e l o o k s l i k e :

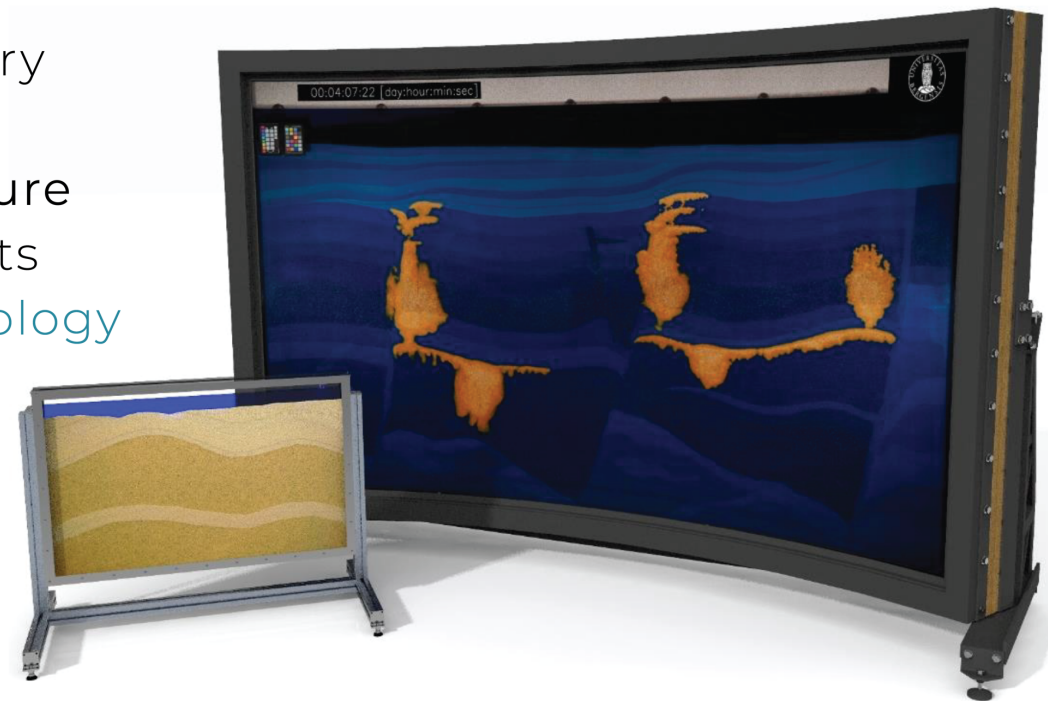


# What are FluidFlowers?

- accessible and immersive carbon storage experience
- seeing is believing - join us in the subsurface!
- interdisciplinary research and education
- public outreach
- energy transition
- continued learning course for industry

a carbon storage research infrastructure

- multi-physics room-scale experiments
- capable of representing complex geology
- reuse the same geometry
- modeling code verification
- evaluate CO<sub>2</sub> injection strategies



# Global FluidFlower Friends and Collaborators



Financial contributors



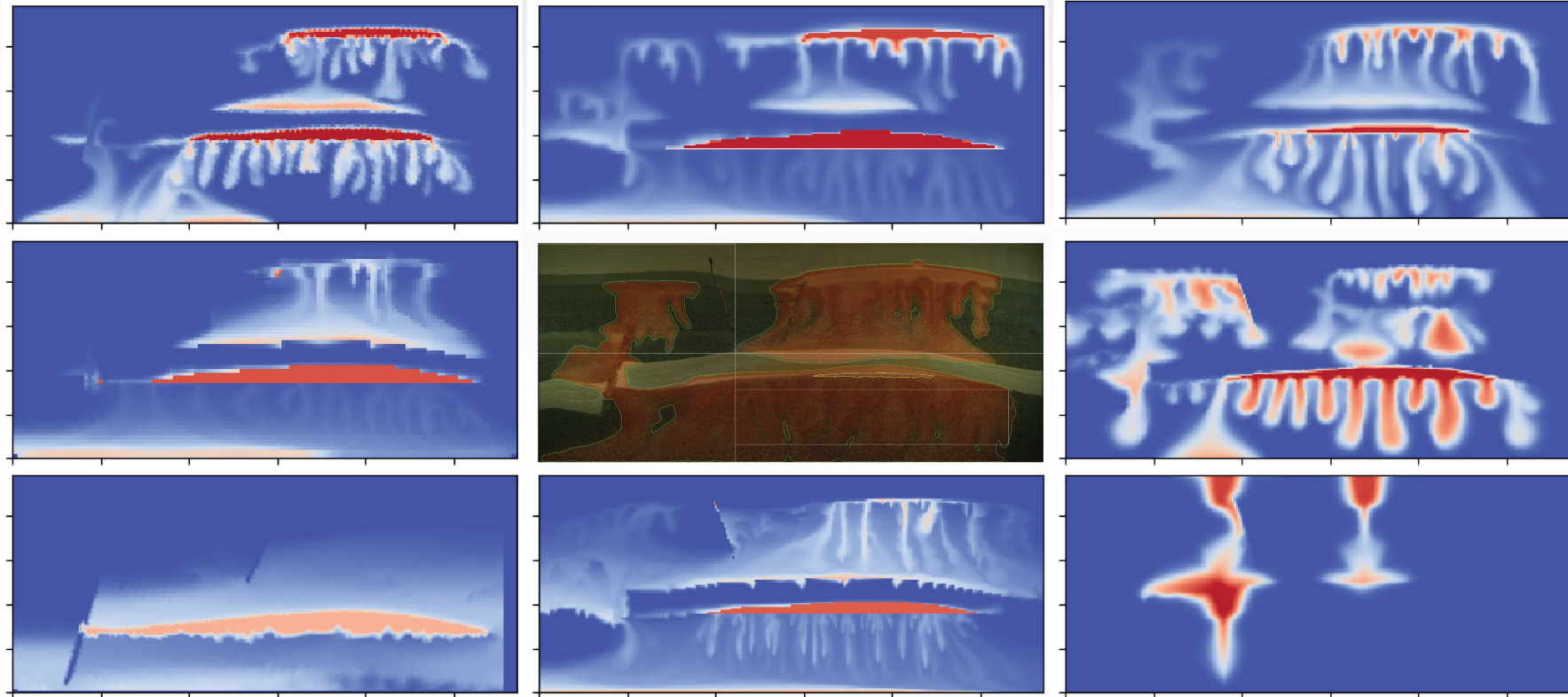
Centre for Sustainable Subsurface Resources



wintershall dea

# The FluidFlower International Forecasting Study

Double-blind forecasting and validation of physical ground truth



Why are forecasts of carbon storage different?

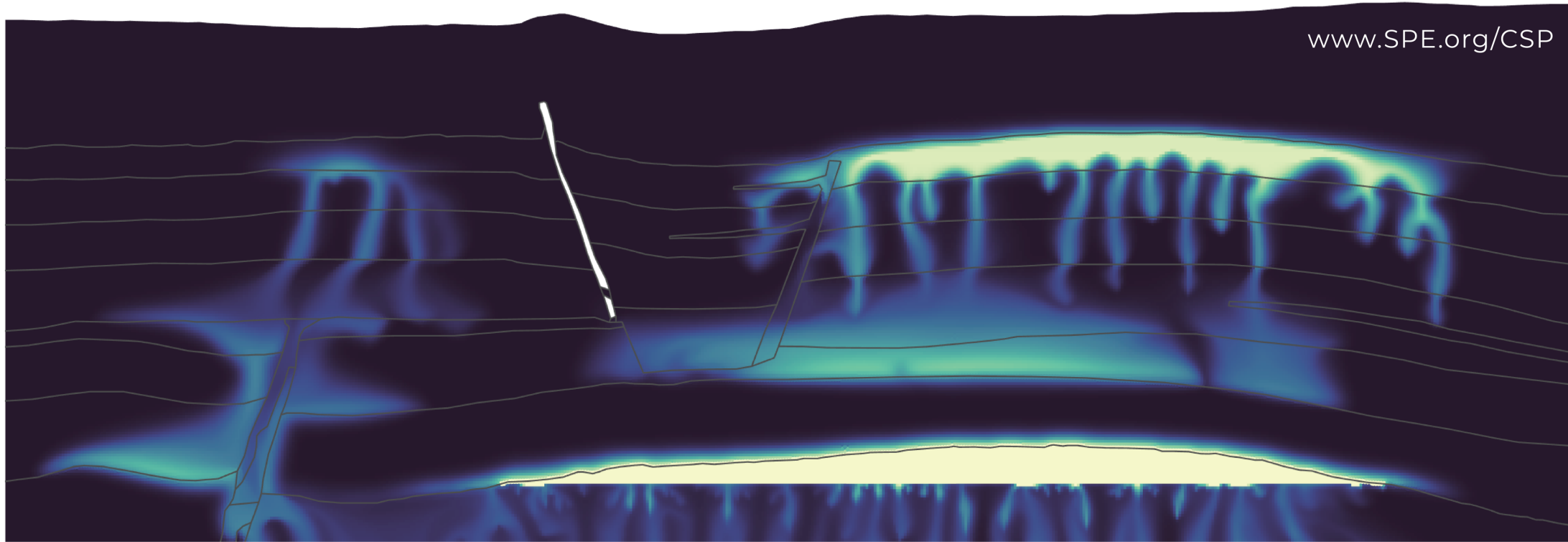


The 11<sup>th</sup> SPE

2023-2025

# Comparative Solution Project

[www.SPE.org/CSP](http://www.SPE.org/CSP)



a common platform and reference case  
for numerical simulation of  
geological carbon storage

Vestland  
**CCUS**  
**2023**

21-22 November, Bergen

“

*For deg som jobber for å få til  
karbon fangst, bruk og lagring,  
i praksis.*

*Og som vil møte andre og få siste  
oppdatering fra industri,  
forskning og akademia.*



**NORCE**



UNIVERSITY OF BERGEN



Centre for Sustainable  
Subsurface Resources

**EOV** Energiomstilling Vest



Øygarden  
næringsutvikling KF



BERGEN  
KOMMUNE

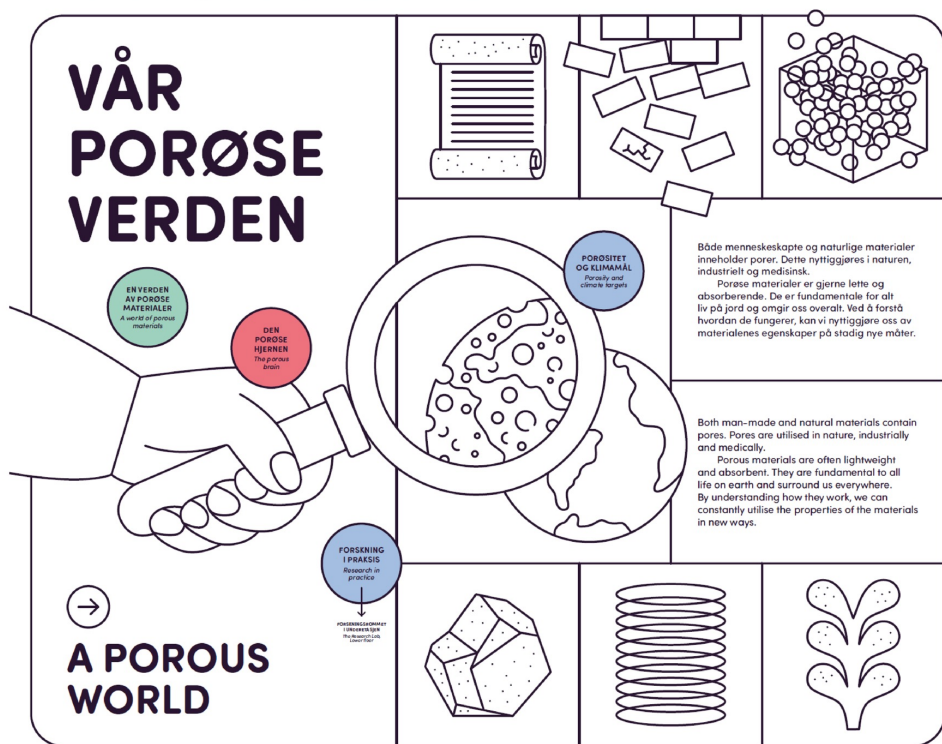
- Back up slides

# Our porous world

the porous brain

porosity and climate targets Interdisciplinary dissemination on the importance of porous media in everyday life, energy transition and carbon storage

a world of porous materials



exhibition at the University Museum of Bergen



public lectures, hands-on demonstration kid-focused activities

2022 - 2023



# Significant markets for Decarbonisation expected in North Western Europe



CO<sub>2</sub> emitters in northern Europe, sources > 100,00 t p.a.