ERA-NET ACT PRE-ACT

Monitoring CO_2 storage performance | Filip Neele

TNO innovation for life

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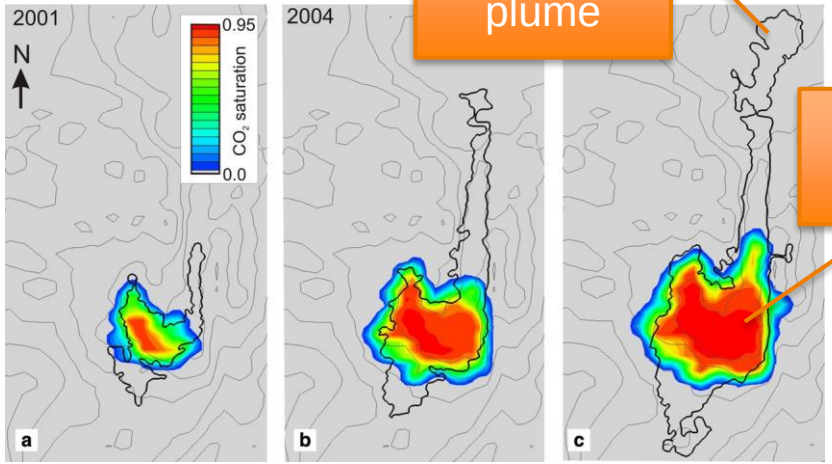
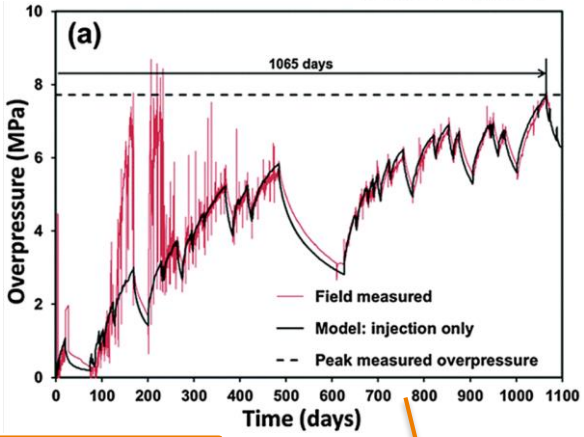
MONITORING CO_2 STORAGE SITE PERFORMANCE

Observed plume

Predicted plume



CO_2 plume in Utsira Fm (Sleipner project)



Differences monitoring and model prediction:
Is this significant?
Is there a problem?
Need more data?

Pressure during CO_2 injection

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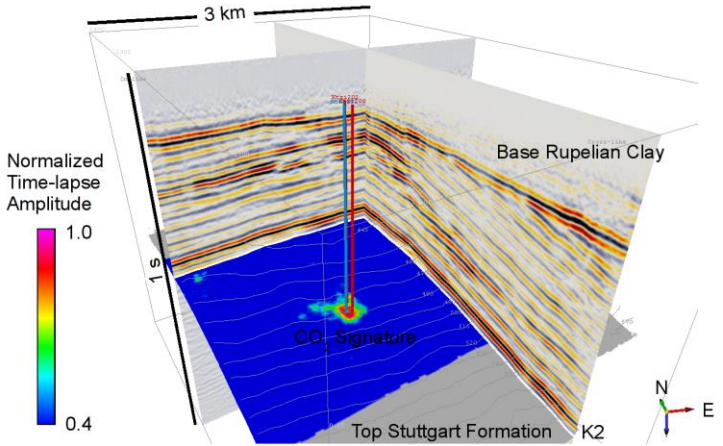
- Key questions:
  - How best to monitor CO_2 in reservoir / subsurface?
  - How well can we determine site performance (= safety and security of CO_2 storage)
  - What are the uncertainties in geological knowledge *and* in monitoring data?



Courtesy CO2SINK project (GFZ and Uppsala University))

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- Impact
  - Better understanding of monitoring requirements – design principles for ‘fit-for-purpose’ monitoring system
  - Guidance for storage operators and regulators – how to decide whether system is performing as planned

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Pre-ACT facts

- Budget: M€ 5.2
- Duration: 1/9 2017 – 31/8 2020
- Partners: SINTEF (coordinator), BGS, GFZ, TNO, NORSAR, PML
- Industry: Shell, Statoil, TAQA, Total


THANK YOU FOR YOUR ATTENTION
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