



H2020-LC-SC3-NZE-6-2020: Geological Storage Pilots

CO₂ Geological Storage Pilots in Strategic Territories

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The PilotSTRATEGY project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101022664

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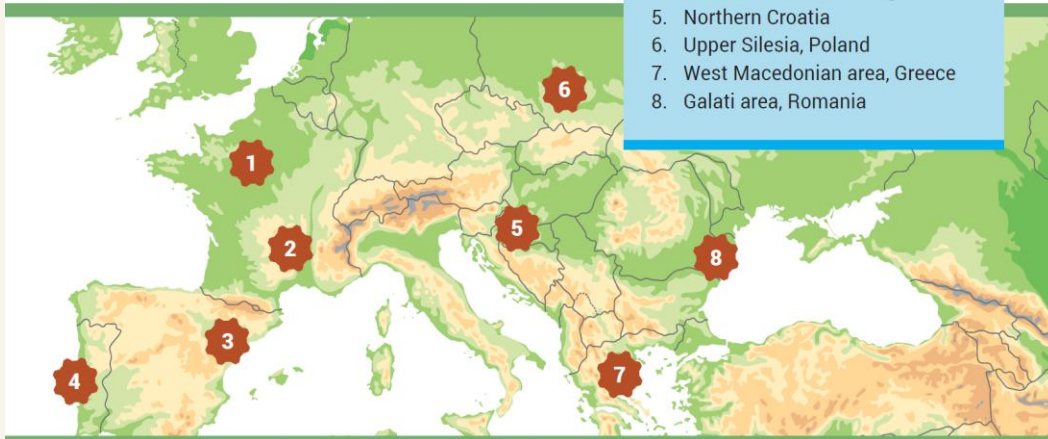
PilotSTRATEGY

Built from STRATEGY CCUS (H2020, CSA 2019-2022)

CCUS economic plans: technical, economical (TEA), environmental (LCA) and societal aspects (Regional Stakeholder Committees)



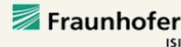
1. Paris basin, France
2. Rhône Valley, France
3. Ebro basin, Spain
4. Lusitanian basin, Portugal
5. Northern Croatia
6. Upper Silesia, Poland
7. West Macedonian area, Greece
8. Galati area, Romania



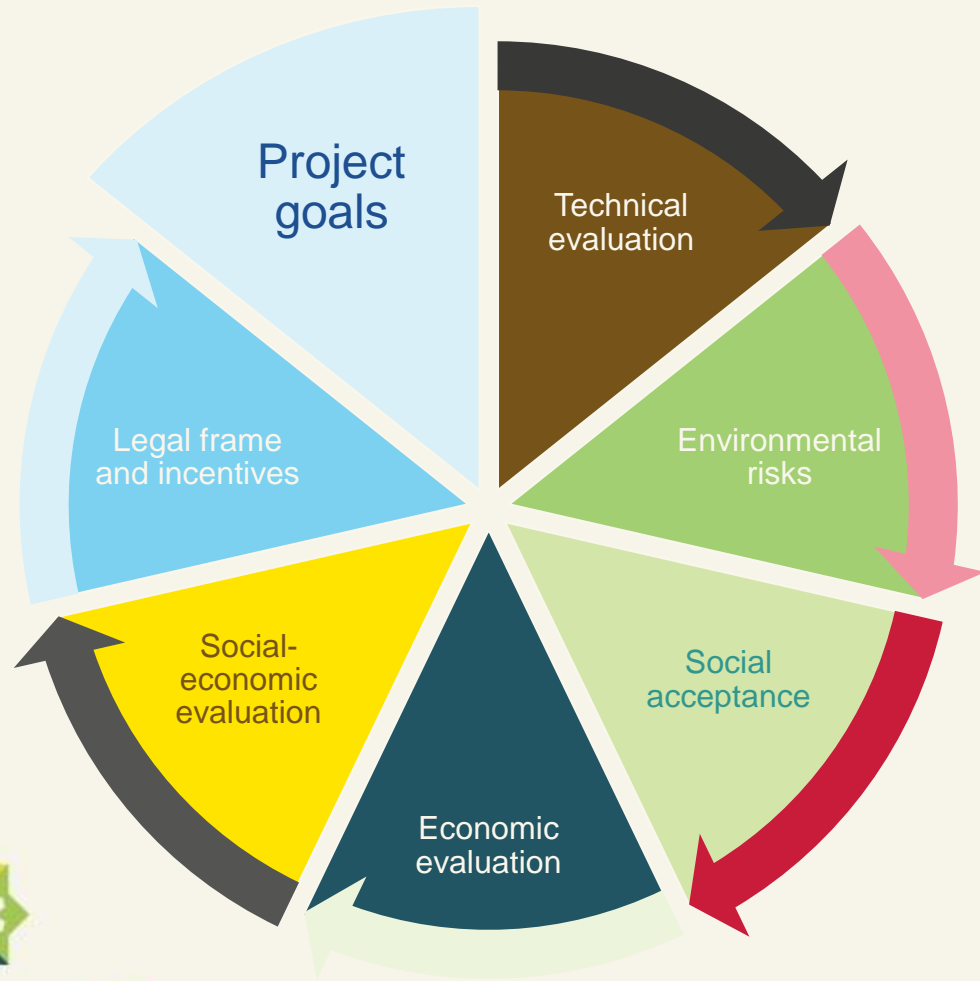
16 partners (+ 3 FR third parties)

Budget: € 10,022,547.50

Duration: 5 years (from May 2021 to April 2026)



PilotSTRATEGY Objectives and Multi-criteria approach



- Detailed study of **Deep saline aquifers** for CO₂ geological storage pilot sites to support development of carbon capture and storage (CCS)
- **Class IV** Economic evaluation of **CCS concept** for storage sites in FR, PT and ES
- **Pre-investment proposal** for the **3 pilots in France, Portugal and Spain**, and development concept proposal for Poland and Greece regions.



Were we are in 2023

- Portugal and Spain decision on storage site: Portugal offshore and Spain onshore
- Storage complex characterization: sampling, log analysis, experimental data, geophysical data
- Launching numerical models: models purposes and software
- Building CCS concept for the storage pilot
- Risk identification and Risk register
- Community profile & Regional Stakeholder Committees

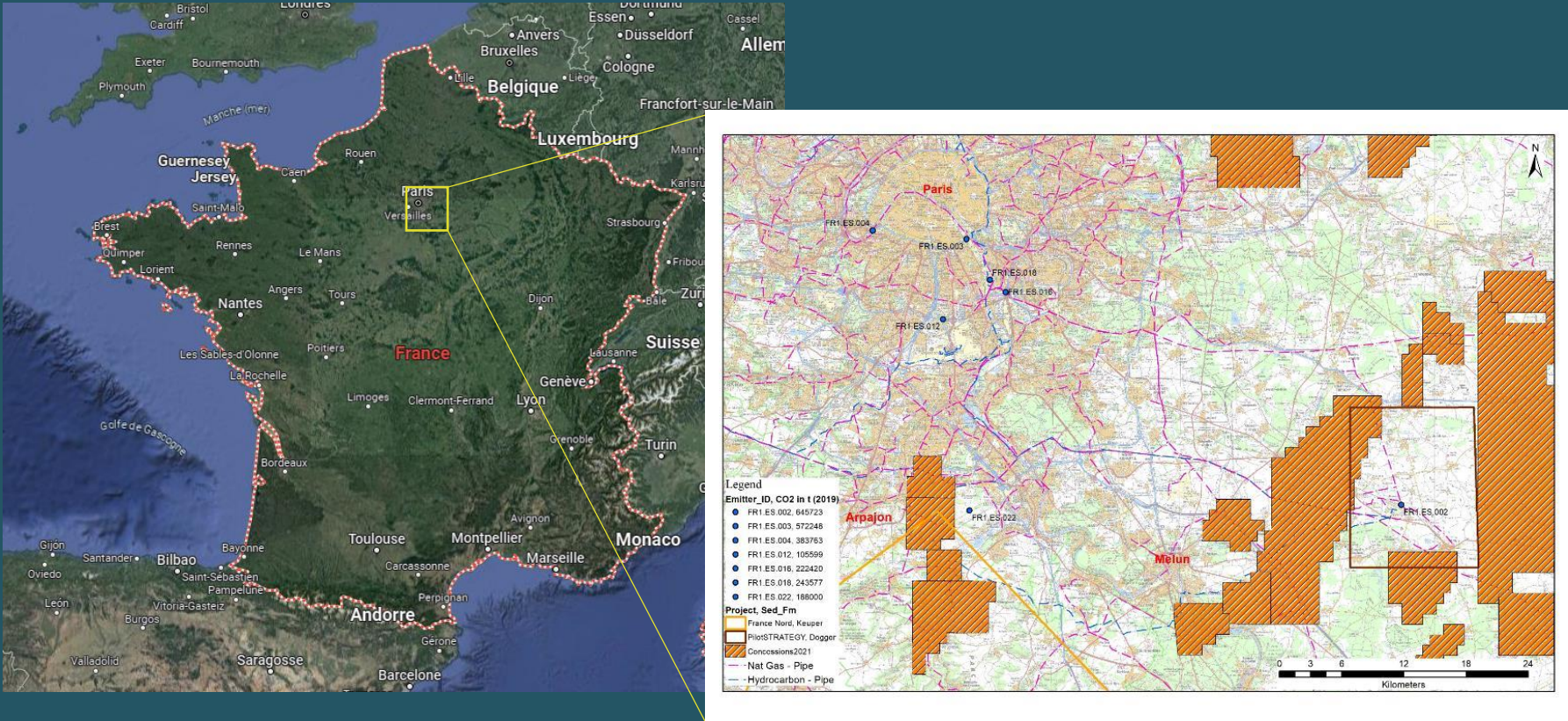


*Picture: Fieldwork commences south of Aragon in Spain's Ebro Basin.
Credit: IGME*



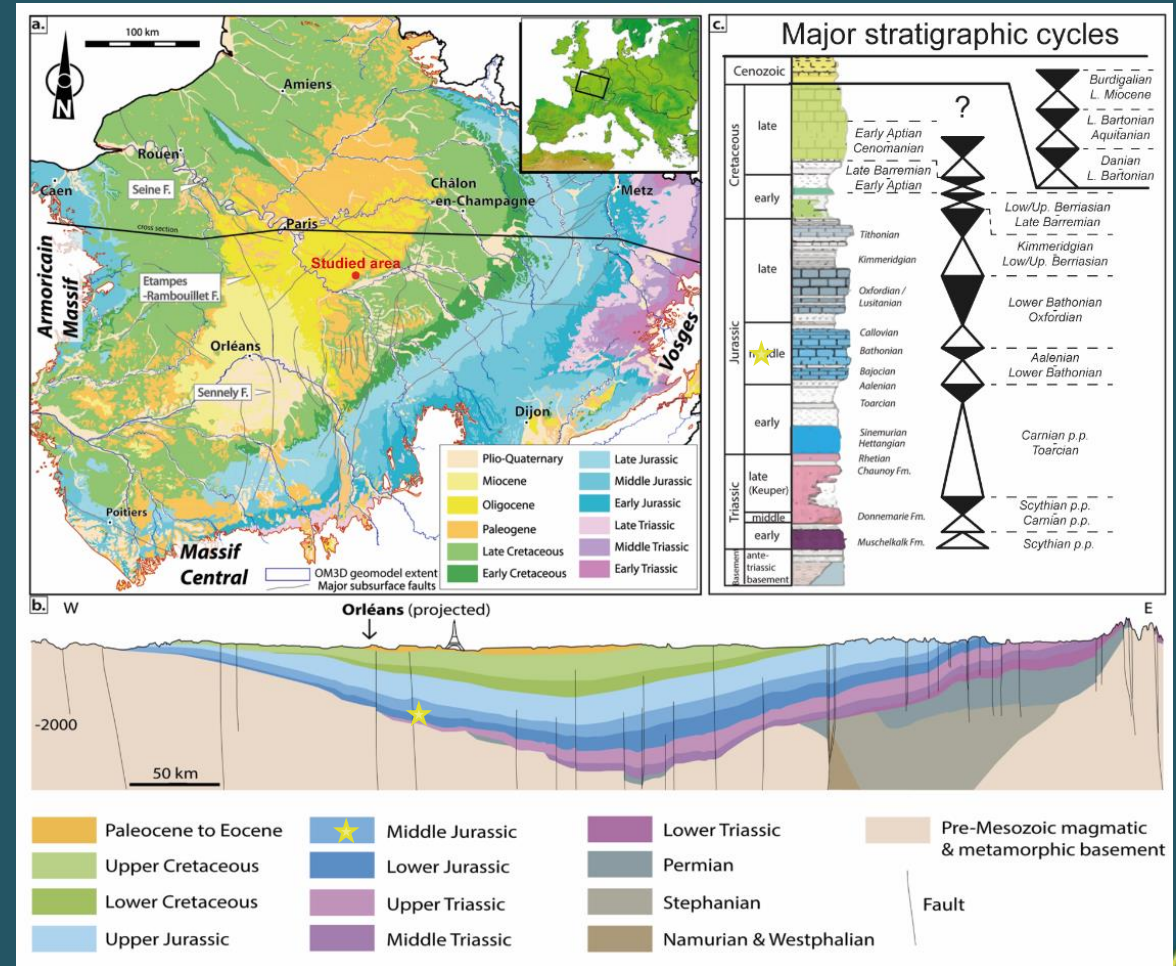
Paris Basin Grandpuits - French region

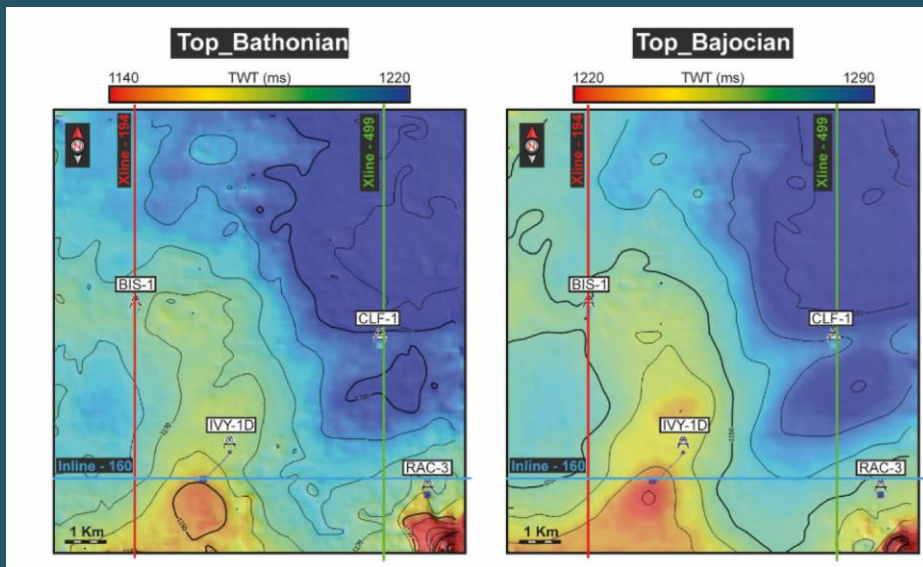
CCS pilot – Fertilizer plant > 300 kt/CO₂ per year



Paris Basin Grandpuits (France)

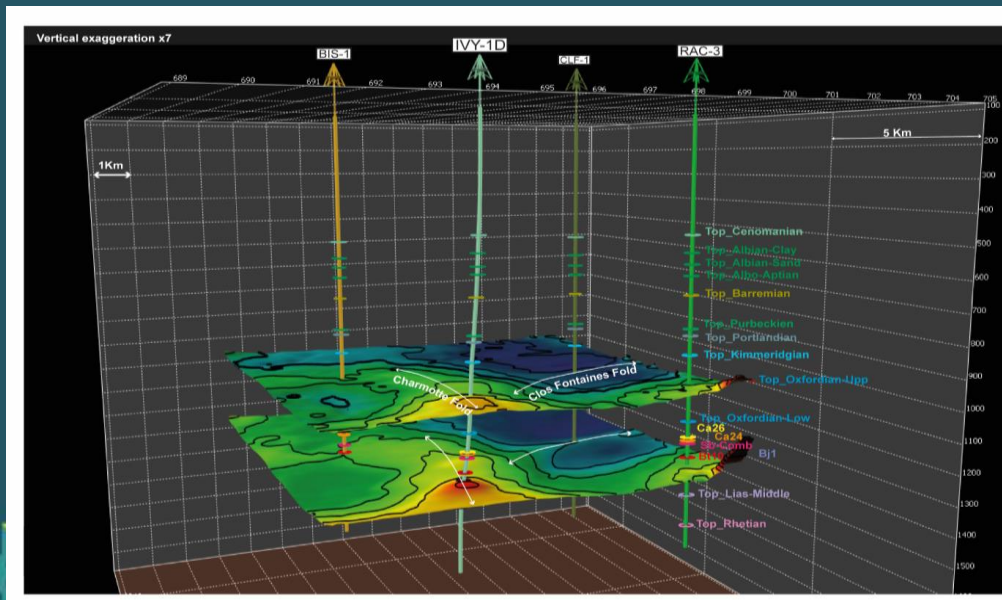
- Dogger Reservoir
- intensely exploited reservoir :
 - geothermal for decades,
 - Oil & gas exploration/production
 - Dynamic data (geothermal)
 - Cores and petrophysics (oil reservoir)
- New knowledge, new data of the storage complex,
 - 3D seismic acquisition in June 2022
 - Geochemical experimental data
 - Geomechanical tests



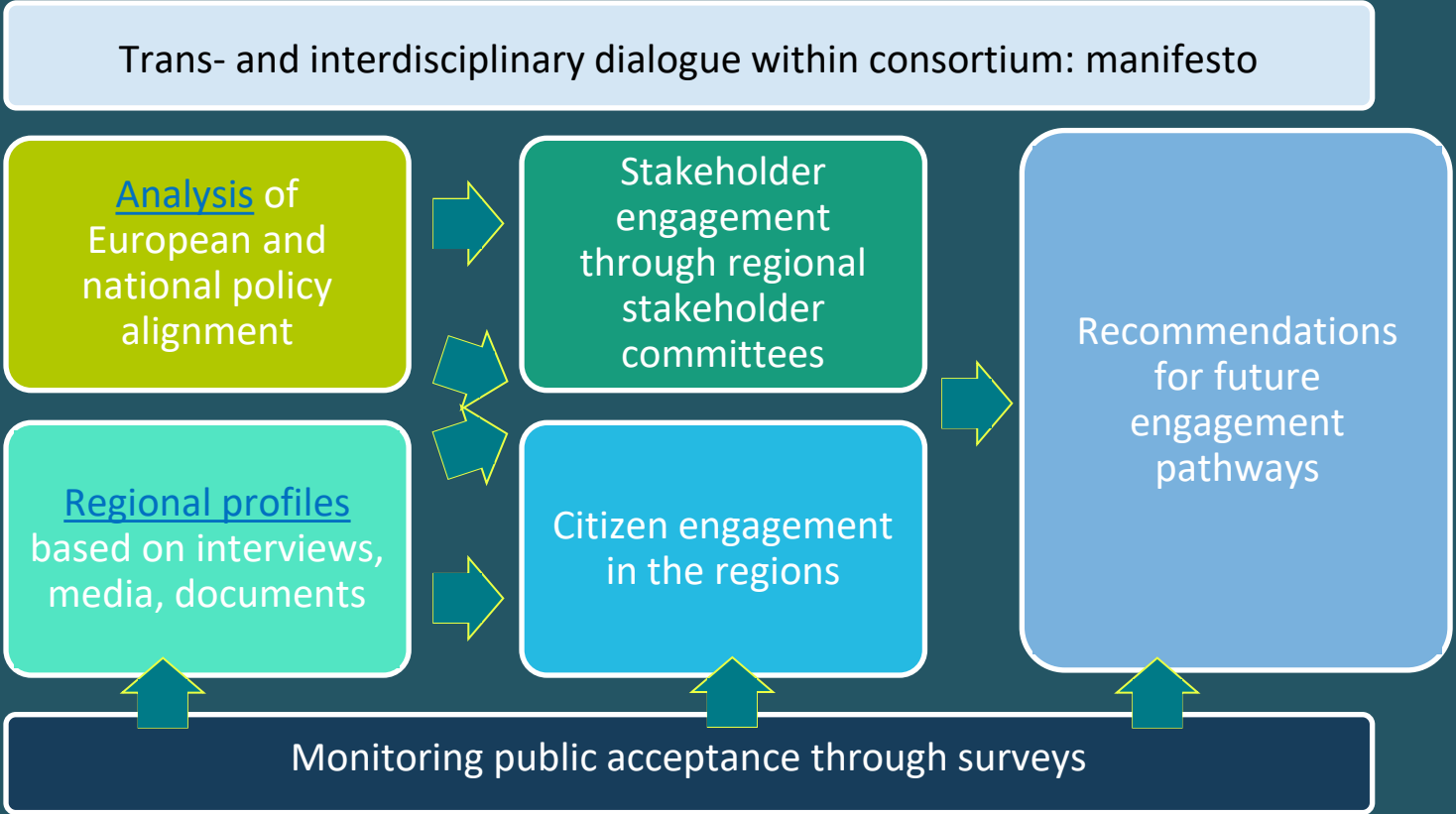


Paris Basin Grandpuits - French region

- CCS concept and pilot design
 - CO₂ source: Fertilizer plant
 - Transport: new pipeline or truck (economic and societal insights)*
 - Wellbore design: location, equipment, profile
- Risk Register and likelihood calculation,
 - Technical risks
 - Quantitative approach (and qualitative)
 - Stakeholder consultation

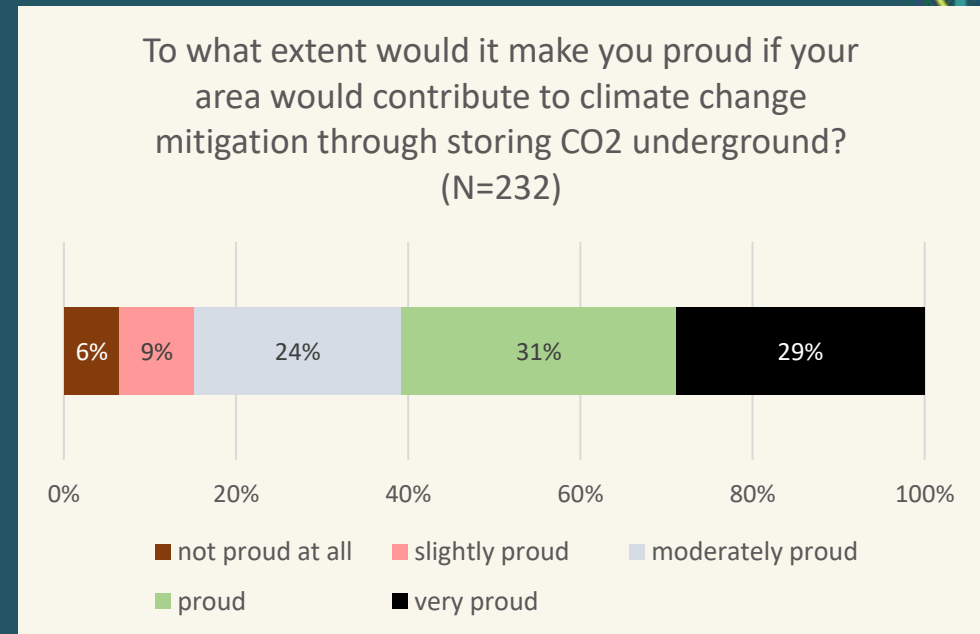
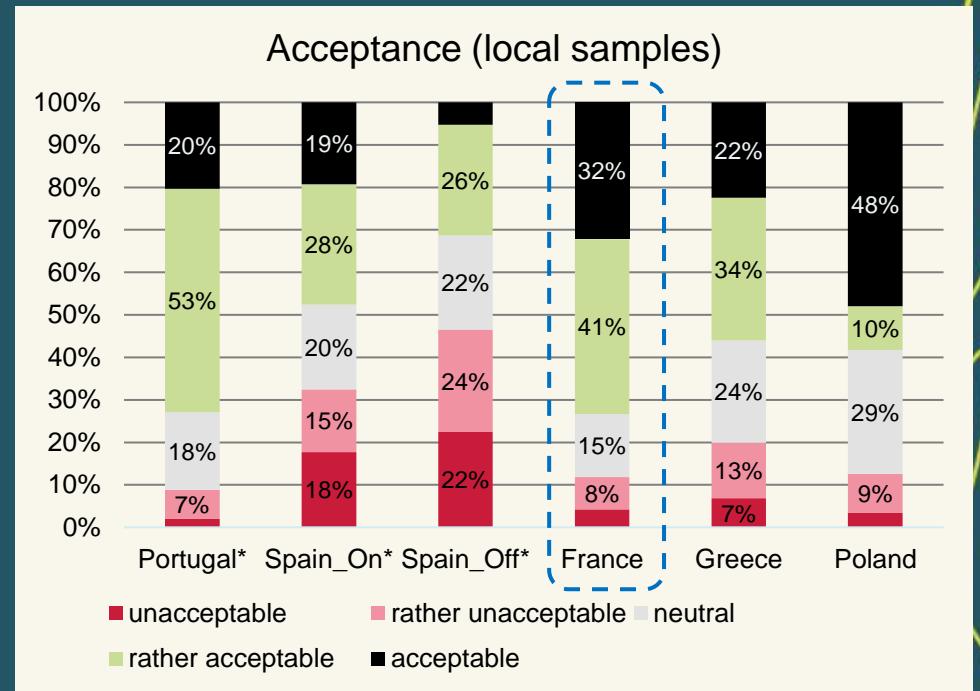


Overview on societal participation and engagement in PilotSTRATEGY



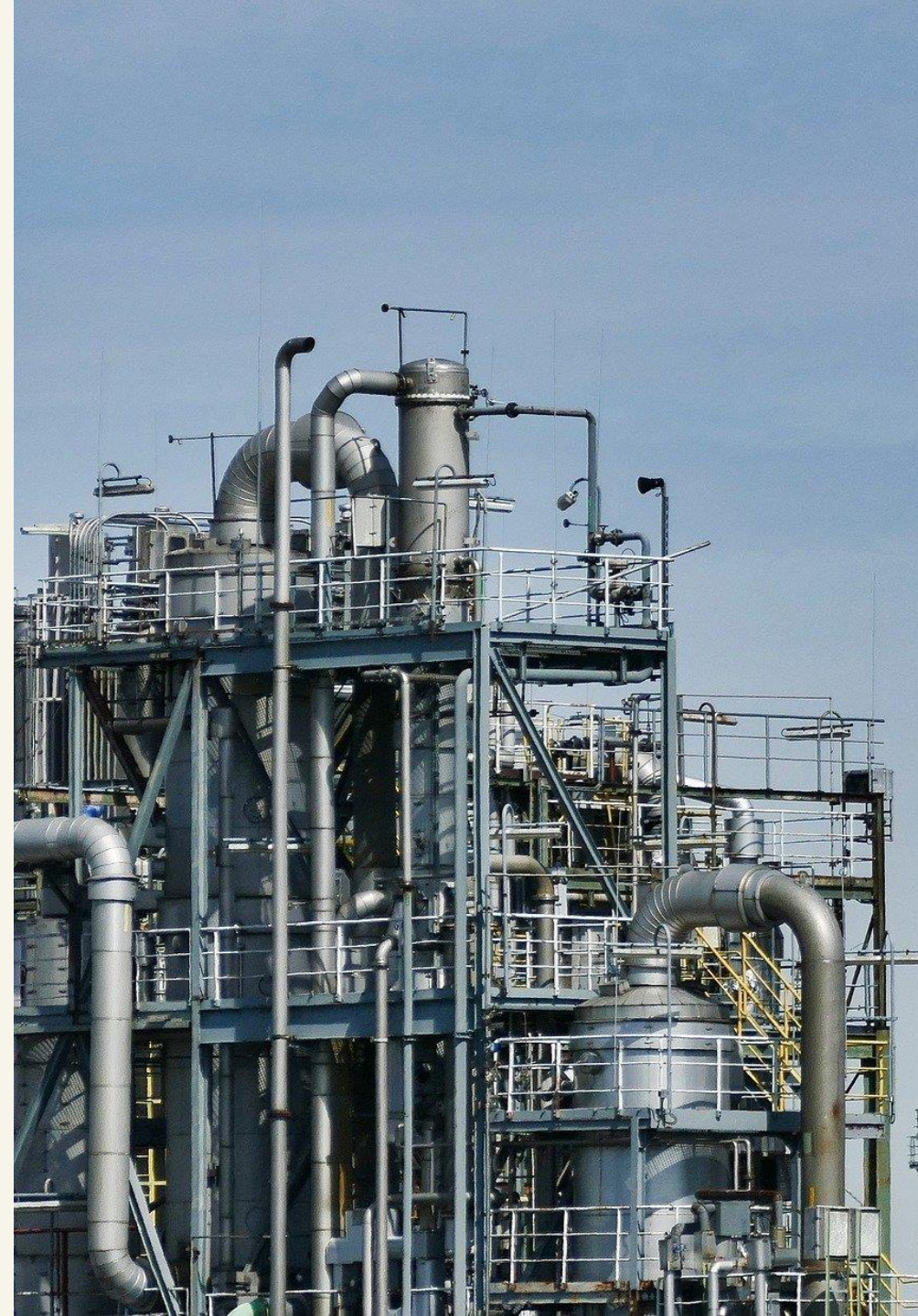
Preliminary findings for France

- Regulatory framework is in an advanced stage, past and ongoing CCUS project activities, relevant industries
- Societal discussion
 - Regular and increasing media coverage, comprehensive content, balanced content of online media analysed
 - CCS is partly perceived by societal stakeholders as clashing with other mitigation strategies, but also as a benefit for industry to decarbonize and to prosper
 - Positive overall evaluation of CCS and high to medium acceptance on a potential regional project in survey study
- **Current conclusion:** several developments are observable towards a pathway for CCS, but societal tensions around the topic exist as well that could connect with other debated societal issues



Perspectives

- Have a pilot scale CCS operating by 2027
- Research permit
 - Drilling the appraisal well by 2026
 - Inject 100 kt of CO₂
- Challenges
 - Permitting: update of environmental code
 - Funding schema not defined





Thank you for listening

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