

PilotSTRATEGY is an ambitious five-year international research project on the use of deep saline aquifers for geological storage of CO₂ to support development of large-scale carbon capture and storage (CCS), a critical technology in the net-zero transition.

Building on the findings of the STRATEGY CCUS project, PilotSTRATEGY will carry out detailed studies in three promising regions in France, Portugal and Spain. We will also enhance knowledge of CO₂ storage options in Greece and Poland.

Objectives

- ➊ Focus on deep saline aquifers which promise large capacity for CO₂ storage
- ➋ Support safe and effective storage pilots
- ➌ Engage with citizens & stakeholders; evaluate factors affecting CCS acceptance



1. Paris Basin, France

- ➊ Industrial facility already capturing > 300 kt/CO₂ per year
- ➋ Storage resources within Keuper & Dogger Formations
- ➌ Keuper: identified effective storage capacity Tier 2 of 0.22Gt
- ➍ Dogger: identified theoretical storage capacity Tier 1 of 0.2Gt

2. Lusitanian Basin, Portugal

- ➊ Includes CO₂ emitters in the Setúbal – Figueira da Foz axis; could accept CO₂ from Lisbon region
- ➋ CO₂ effective DSA storage capacity: 0.26Gt onshore Tier 2; theoretic capacity 2.86GT offshore Tier 1
- ➌ Social acceptance will be factor in storage pilot's location

3. Ebro Basin, Spain

- ➊ Region includes Tarragona industrial area
- ➋ Onshore & offshore CO₂ storage potential exists within 100km radius
- ➌ Onshore CO₂ storage estimated at up to 0.85Gt Tier 2 of capacity

5. Upper Silesia, Poland

- ➊ Region includes industrial areas of Katowice, Rybnik and Bedzin
- ➋ Poland's most industrialised region, with 16 coal mines and 7GW of power generation
- ➌ CO₂ storage capacity of 0.015Gt in uneconomic coal beds and of 0.1GT In DSA

4. West Macedonia, Greece

- ➊ Region covers Kozani and Ptolemaida industrial areas
- ➋ Storage resource provided by the Mesohellenic Trough
- ➌ CO₂ storage in DSA estimated at 1.16Gt Tier 1 (theoretical)

6. Germany (supporting country)

7. UK (supporting country)

Work Packages

Led by France's BRGM, our research team combines the skills and experience of 16 scientific and industrial partners from seven European countries.



WP2

Geo-characterisation

Assembling, acquiring and interpreting geological data



WP3

Simulation

Assessment of site storage capacity and integrity



WP4

Pilot Development

Development concepts and pre-FEED for proposed pilots (Ebro, Lusitanian and Paris Basins)



WP5

Safety

Ensuring proposed pilots meet the best safety and performance standards



WP6

Social Acceptance

Investigating societal acceptance and public engagement



WP7

Communication and Impact

Increasing the visibility and impact of the project

Why is this project important?

- ❶ Carbon capture and storage (CCS) – whereby CO₂ is captured from large emitters for permanent underground storage – is pivotal to Europe's climate commitments. Meeting the challenge will depend on sufficient geological CO₂ storage becoming available in time.
- ❷ PilotSTRATEGY will help develop CO₂ storage capacity and build confidence in CCS. Further research, policy support, and building public acceptance are critical to ensure CCS becomes a feasible climate mitigation option for local industries and local communities.
- ❸ We are focusing on deep saline aquifers – porous rock formations filled with brine several kilometres below ground – which promise a large capacity for storing captured CO₂, but which have been under-researched for CCS until now.



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