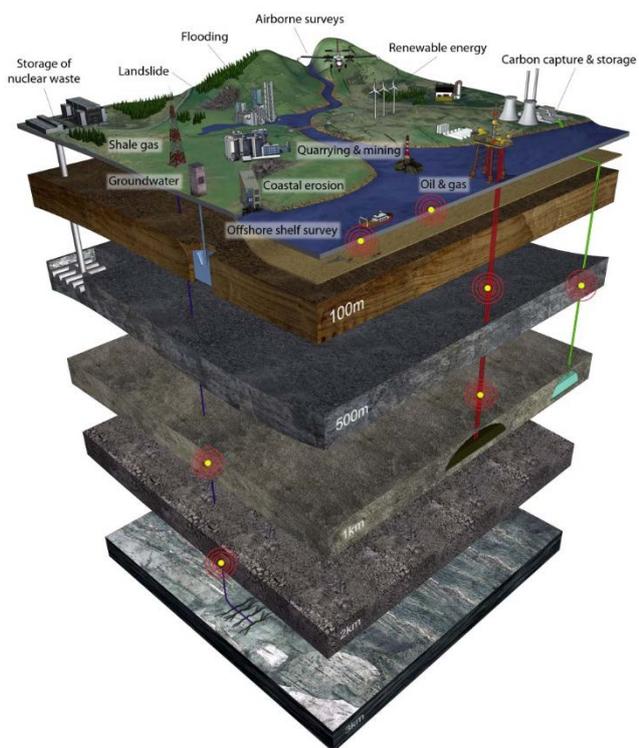


## EPOS's newest thematic community: Geo Energy Test Beds

### Seeking answers to science questions in sustainable subsurface energy

For 2020, the European Union has committed to cutting its greenhouse gas emissions to 20% below 1990 levels, with further cuts expected by 2050. Our portfolio of power generation therefore will need to play a large part in emissions reductions by increasing renewable energy sources such as wind, tidal and solar power, but also through carbon capture and storage (CCS) on existing and future fossil fuel power plants, shale gas, nuclear and geothermal power. All these technologies have similar geological and environmental issues around their containment, deep reservoirs and, most importantly, sustainability, meaning we will need high levels of safe and thorough subsurface management and assurance of environmental security to realise the potential of these energy sources in densely populated countries.

Geo Energy Test Beds are experimental test and monitoring facilities that exist, or are being developed, to understand the subsurface processes that make environmental sustainability possible. Their work will underpin the design of management systems for the subsurface and the development of robust regulation.



A key aim of the GeoEnergy Test Bed TCS is to allow online publication of monitoring data through combined IT systems and delivery across European GeoEnergy Test Beds, to encourage transparency and to improve public interest and support which, in turn, will develop trust in the process and resulting science. In the long term European GeoEnergy Test Beds will help to bring about a new energy system in Europe.

The first task of the GeoEnergy Test Bed TCS is to bring together key European subsurface facilities and laboratories to work alongside other EPOS TCS, to create an efficient and comprehensive multidisciplinary research platform for the Earth sciences in Europe.

### EPOS GEOENERGY TEST BED OBJECTIVES

Facilitate the integrated use of data, models and facilities, across geoenery domains

Provide access to observation, modelling and experimental facilities

Integrate data, models and facilities from dedicated GeoEnergy Test Beds with existing monitoring facilities not necessarily dedicated to energy development

Promote an integrated approach to planning the next generation of research facilities for geo-energies

Online publication of monitoring data to encourage transparency and to improve public buy-in and trust

Provide the scientific basis on which systems to sustainably manage subsurface geoenery resources can be designed, and robust regulations can be developed

Help to bring about a new energy system in Europe