

Geological Service for Europe

Bringing the Subsurface into the Light

What is GSEU?

GSEU¹ stands for the Geological Service for Europe project, a five-year, EU co-funded Cooperation and Support Action (CSA) that brings together baseline subsurface data and knowledge to manage Europe's natural resources and achieve Net Zero, with the ultimate aim of delivering a Geological Service for Europe (GSE) – a geoscience data, information, and knowledge-based service supporting a sustainable future for Europe.

GSEU comprises a pan-European network of experts working together to harmonise data, information and knowledge about the European subsurface, and focusing on:



Raw Materials



GeoEnergy Resources



Groundwater Resources



Coastal Vulnerability and Offshore Wind Farm Siting



Geological Framework Setup



European Geological Data Infrastructure (EGDI²)

Why is GSEU Important?

The Earth's subsurface holds indispensable resources for European industry and society and, if carefully managed, will be the key to decarbonising our economy. To tackle complex transnational and continental-scale environmental and societal challenges we need to

be able to zoom out and go beyond national borders.

The Earth is an interconnected system of processes, and geological knowledge helps us to understand and effectively translate these processes into sound, science-informed policy.

It is crucial to build strong bridges between geoscience and policy makers, industry and citizens to support the Green Deal and enable a sustainable future for Europe.



Funded by
the European Union

Areas of Expertise and Objectives



Raw Materials

- Re-evaluate European resources of primary critical raw materials on and offshore, focusing on those needed for the green transition
- Establish an International Centre of Excellence on Sustainable Resources Management (EU ICE-SRM)
- Promote the use of UNFC⁴ for resources and UNRMS⁵ for mineral resources management in Europe



GeoEnergy Resources

- Provide pan-European inventories, characterisations and knowledge of geothermal energy resources, CO₂ sequestration and temporary storage of sustainable energy carriers



Groundwater Resources

- Support integrated, sustainable use and protection of European groundwater resources
- Improve data collection and management for monitoring and forecasting groundwater quantity and quality



Coastal Vulnerability and Offshore Wind Farm Siting

- Enable informed decisions on sustainable development and protection of coastal areas and the seabed



Geological Framework Setup

- Set up comprehensive metadata of European geological maps and develop harmonised pan-European maps and 3D-models
- Share best practices for 3D geomodelling and visualisation
- Demonstrate the cross-thematic use of a geological framework for decision support



European Geological Data Infrastructure (EGDI²)

- Transform EGDI into a knowledge infrastructure for enhanced data management and sharing (see Factsheet: EGDI)

References:

1. geologicalservice.eu, 2. europe-geology.eu, 3. eurogeosurveys.org.
4. unece.org/sustainable-energy/sustainable-resource-management/united-nations-framework-classification
5. unece.org/sustainable-energy/unfc-and-sustainable-resource-management/unrms



49 PARTNERS

from 36 COUNTRIES

The Geological Surveys of Europe have a long history of cooperation, both through their umbrella organisation EuroGeoSurveys (EGS³) – the project coordinator – and through numerous joint projects and programmes.

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www.geologicalservice.eu



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