

## Why EPOS

Understanding how the Earth works as a system is critically important to modern society. Volcanic eruptions, earthquakes, floods, landslides, tsunamis, weather, and global climate change are all Earth phenomena impacting on society.

Similarly, depleting natural resources can also damage our economy, security, and the safety and sustainability of the environment.



So how can we better understand these phenomena? How can we understand more about Earth chemical and physical processes responsible for these phenomena? How can we take measures to prevent the affect of these phenomena on the environment? Can we predict them?

Solid Earth science is the place where to find answers to these questions. Solid Earth science, indeed, brings together many diverse disciplines such as geology, seismology, geodesy, volcanology, geomagnetism as well as chemistry and physics as they all apply to the workings of Earth. Progress in solid Earth science relies on the integration of multidisciplinary data and services from such different disciplines to make an essential step to unravel and monitor Earth phenomena with the final goal of forecasting their impact on the environment. Unravelling physical and chemical processes responsible for these phenomena requires harmonized, freely accessible data and tools that allow innovative, multidisciplinary and cross-disciplinary research.

By improving and facilitating the integration, access, use, and re-use of solid Earth science data, data products, services and facilities, EPOS will indeed transform the European research landscape, driving discovery and developing solutions to geo-related challenges facing the European society.

EPOS is developing a holistic, sustainable, multidisciplinary research platform to provide coordinated access to harmonized and quality controlled data from diverse Earth science disciplines, together with tools for their use in analysis and modelling.

EPOS brings together 25 European nations and combine national solid Earth science infrastructures and their associated data and models together with the scientific expertise into one integrated delivery system for the solid Earth.

This infrastructure will allow the Earth science to achieve a step change in our understanding of the planet; it will enable us to prepare for geo-hazards and to responsibly manage the subsurface for infrastructure development, waste storage and the use of Earth's resources.

