

EPOS for Governments & Society

Society needs resources to support home life, industry and business and it needs security in the face of natural hazards. Earth science underpins both these areas and EPOS will facilitate research innovation to support European society.

Safety in the face of natural hazards is essential for society. Earth science explores the driving forces behind Europe's geo-hazards, such as earthquakes, volcanoes, landslides and floods. Earth scientists use natural and experimental data to model how geo-hazards arise and evolve. For example, combining data from volcanic structure, geochemical analysis, seismology and satellite geodesy allows researchers to track volcanic activity, giving societies at risk from eruptions a clearer idea of their potential exposure. Europe experiences rare but highly damaging events, including catastrophic volcanic eruptions and earthquakes. Combining a sound physical understanding of natural hazards with the means to monitor and predict their occurrence will mitigate their effects, help authorities to predict and plan for natural disasters better leading to improved risk management and decreasing the impact of such episodes.

The secure and sustainable supply of natural resources – energy, water and raw materials – underpins strong economic growth. Successful societies depend on the science base to assess the genesis, extent and conservation of natural resources, in order to exploit them and discover new sources without detriment to our environment. Europe is experiencing increasing demand for resources, especially energy; whilst it has coal, oil and gas, and successful multinational companies that exploit them, there is also significant potential for unconventional sources such as shale gas. Developing energy resources and managing waste, safely and responsibly, requires multidisciplinary data and information.

Earth science data can contribute to more effective decision making in multiple ways. Information can be used to identify emerging problems, trends and changes and monitor ongoing situations. EPOS services will help managers make well-informed decisions based on accurate scientific data. Similarly, problems can be anticipated based on forecasts and analysis of future trends.