



The EPOS implementation of thematic services for solid Earth sciences

Massimo Cocco (1) and Epos Consortium (2)

(1) Istituto Nazionale di Geofisica e Vulcanologia, Seismology and Tectonophysics, Rome, Italy (massimo.cocco@ingv.it, 00390651860565), (2) EPOS PP Project

The mission of EPOS is to build an efficient and comprehensive multidisciplinary research platform for the solid Earth sciences in Europe. In particular, EPOS is a long-term plan to facilitate integrated use of data, models and facilities from mainly distributed existing, but also new, research infrastructures for Earth Science. EPOS will enable innovative multidisciplinary research for a better understanding of the physical processes controlling earthquakes, volcanic eruptions, unrest episodes, ground stability, and tsunamis as well as those processes driving tectonics and Earth surface dynamics. EPOS will allow the Earth Science community to make a significant step forward by developing new concepts and tools for accurate, durable, and sustainable answers to societal questions concerning geo-hazards and those geodynamic phenomena relevant to the environment and human welfare.

EPOS coordinates the existing and new solid Earth RIs within Europe and is building the integrating RI elements. This integration requires a significant coordination between, among others, disciplinary (thematic) communities, national RIs policies and initiatives, as well as geo- and IT-scientists. The RIs that EPOS coordinates include: i) Regionally-distributed geophysical observing systems (seismological and geodetic networks); ii) Local observatories (including geomagnetic, near-fault and volcano observatories); iii) Analytical and experimental laboratories; iv) Integrated satellite data and geological information services.

We present the results achieved during the EPOS Preparatory Phase (which will end on October 2014) and the progress towards construction in terms of both the design of the integrated core services (ICS) and the development of thematic core services (TCS) for the different communities participating to the integration plan. We will focus on discussing the strategies adopted to foster the necessary implementation of TCS, clarifying their crucial role as domain-specific service hubs for coordinating and harmonizing national resources/plans with the European dimension of EPOS. We will present the prototype of the ICS central hub as a key contribution for providing multidisciplinary services for solid Earth sciences as well as the glue to keep ICT aspects integrated and rationalized across EPOS. Finally we will present the well-defined role of the EPOS-ERIC Head-Quarter to coordinate and harmonize national RIs and EPOS services (through ICS and TCS) with a clear commitment by national governments. This will be an important opportunity to discuss the EPOS multidisciplinary platform for discoveries to foster scientific excellence in solid Earth research.