Geophysical Research Abstracts
Vol. 14, EGU2012-1453, 2012
EGU General Assembly 2012

Integrating Research Infrastructures for solid Earth Science: the EPOS preparatory phase roadmap and achievements

M. Cocco (1) and EPOS Consortium (2)

(1) Istituto Nazionale di Geofisica e Vulcanologia, Seismology and Tectonophysisc, Rome, Italy (massimo.cocco@ingv.it, 00390651860565), (2) European Plate Observing System, www.epos-eu.org

The European Plate Observing System (EPOS) is a long-term integrated research infrastructure plan to promote innovative approaches for a better understanding of the physical processes controlling earthquakes, volcanic eruptions, unrest episodes and tsunamis as well as those driving tectonics and Earth surface dynamics. The EPOS plan aims at integrating the currently scattered, but highly advanced European facilities into one, distributed, but coherent multidisciplinary Research Infrastructure (RI) allowing sustainable long-term Earth science research strategies and an effective coordinated European-scale monitoring facility for solid Earth dynamics taking full advantage of new e-science opportunities. The EPOS preparatory phase (EPOS PP), funded by the European Commission within the Capacities program, started on November 1st 2010 and it has completed its first year of activity.

The EPOS mission is to integrate the existing research infrastructures (RIs) in solid Earth science in order to increase the accessibility and usability of multidisciplinary data from monitoring networks, laboratory experiments and computational simulations enhancing worldwide interoperability in Earth Science by establishing a leading integrated European infrastructure and services.

We will present the EPOS PP roadmap for the long-term solid Earth observation strategies as well as the e-science implementation plan envisioned to establish an innovative integrated e-infrastructure component necessary to create an effective service to users. Moreover, we will show the preliminary outcomes from the first inventory of the RIs we are going to integrate in EPOS. We also plan to discuss the outreach and dissemination actions and the strategy designed to meet the specific user needs. More recently the EPOS and the satellite Earth Observation communities are collaborating in order to promote the integration of data from in-situ monitoring networks and satellite observing systems. The goal is to coordinate the access to data relevant for geohazard research for selected "Supersites" locations in Europe as well as to contribute to the global supersite initiative in the framework of the GEO work program. Making observations of solid Earth dynamic processes controlling natural phenomena immediately available and promoting their comparison with numerical simulations and their interpretation through theoretical analyses will represent a multidisciplinary platform for discoveries which will foster scientific excellence in solid Earth research.

Finally, we will also discuss the priorities for the second year of activity and the key actions planned to better involve users in EPOS. In particular, we will discuss the work done to finalize the identification of the mission needs as well as the activities to start the design phase of the EPOS infrastructure.