



Releasing the digital elevation model for the whole Italian territory: a case study reporting two years of core-data dissemination for Earth Sciences communities and other stakeholders

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EPOS (European Plate Observing System) is the European initiative for the implementation and integration of European Research Infrastructures in the field of Solid Earth Sciences. In particular, EPOS is aimed at creating a common environment for data exchange for both the scientific community and relevant stakeholders interested in Earth Sciences. In such a context, a service providing access to the complete topography of one of the countries participating in EPOS represents a step forward towards the realization of the EPOS mission. Here we report about two years of activity of a data dissemination service which released (for free) a digital elevation model (DEM) of the whole Italian territory at 10 m-resolution named TINITALY/01.

The new TINITALY/01 DEM for the whole Italian territory was completed and presented by INGV in 2007. This DEM was the final result of a project funded by the Italian Ministry of the Environment. TINITALY/01 was completed in two phases: in a first phase, independent elevation models for single regions were derived, and in a second phase, all the regional models were merged into a single, seamless model covering the whole territory of Italy.

In early 2012, a web portal was published (<http://tinitaly.pi.ingv.it/>) through which the above DEM is open for a full web-GIS navigation (3-D navigation in anaglyph mode or standard 2-D hillshade), and where internet navigators can ask for the download of the DEM dataset (in grid format, 10 m-resolution) through the compilation of an online form (http://tinitaly.pi.ingv.it/account_request_form.html). Submission of the form implies stating the destination of use for the data, and acceptance of the policy of use (i.e. no-profit use).

After nearly two years from the opening of the portal, the DEM is still browsed by up to 10-20 users per day (about 3000 visits throughout 2013). As of 31 December 2013, about 220 users affiliated to nearly 150 different institutions or associations (i.e. universities, research institutes, local administrations, etc..) based on 20 different countries (10% of the users from outside Europe) have been accredited for the download of the DEM. The analysis of the destinations of use declared by users shows that they have very different interests, ranging from any branch within Earth Sciences (e.g. Gravimetry, Volcanology, Seismics, Geomorphology etc..) to applied Physics, Archaeology and History, Zoology, Forestry Sciences, Remote Sensing, Civil Protection, Land Use Planning and Environmental Management etc.

Although this service was originally designed and set up outside the EPOS umbrella, the present report illustrates the utility and need of even relatively small infrastructures for the dissemination of core data in the field of Earth Sciences. This experience shows that a similar service can attract the interest of a large variety of scientific communities and private and public stakeholders, which can largely benefit from the availability of similar core-data. To date, TINITALY/01 is the DEM with the highest resolution freely accessible for the whole Italian territory.