



The Mediterranean Supersite Volcanoes (MED-SUV) Project: an overview

Giuseppe Puglisi and the MED-SUV Team

Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Catania - Osservatorio Etneo, Catania, Italy
(giuseppe.puglisi@ct.ingv.it, +39 095 435801)

In response to the EC call ENV.2012.6.4-2 (Long-term monitoring experiments in geologically active regions of Europe prone to natural hazards: the Supersite concept - FP7-ENV-2012-two-stage) a wide community of volcanological institutions proposed the project Mediterranean Supersite Volcanoes (MED-SUV), which is in the negotiation phase at the time of writing.

The Consortium is composed by 18 European University and research institutes, four Small or Medium Enterprises (SME) and two non-European University and research institutes.

MED-SUV will improve the consortium capacity of assessment of volcanic hazards in Supersites of Southern Italy by optimising and integrating existing and new observation/monitoring systems, by a breakthrough in understanding of volcanic processes and by increasing the effectiveness of the coordination between the scientific and end-user communities. More than 3 million of people are exposed to potential volcanic hazards in a large region in the Mediterranean Sea, where two among the largest European volcanic areas are located: Mt. Etna and Campi Flegrei/Vesuvius. This project will fully exploit the unique detailed long-term in-situ monitoring data sets available for these volcanoes and integrate with Earth Observation (EO) data, setting the basic tools for a significant step ahead in the discrimination of pre-, syn- and post-eruptive phases. The wide range of styles and intensities of volcanic phenomena observed on these volcanoes, which can be assumed as archetypes of 'closed conduit' and 'open conduit' volcano, together with the long-term multidisciplinary data sets give an exceptional opportunity to improve the understanding of a very wide spectrum of geo-hazards, as well as implementing and testing a large variety of innovative models of ground deformation and motion. Important impacts on the European industrial sector are expected, arising from a partnership integrating the scientific community and SMEs to implement together new observation/monitoring sensors/systems. Specific experiments and studies will be carried out to improve our understanding of the volcanic internal structure and dynamics, as well as to recognise signals related to impending unrest or eruption. Hazard quantitative assessment will benefit by the outcomes of these studies and by their integration into the cutting edge monitoring approaches thus leading to a step-change in hazard awareness and preparedness and leveraging the close relationship between scientists, SMEs, and end-users.