



Initiative for the creation of an integrated infrastructure of European Volcano Observatories

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Active volcanic areas in Europe constitute a direct threat to millions of European citizens. The recent Eyjafjallajökull eruption also demonstrated that indirect effects of volcanic activity can present a threat to the economy and the lives of hundreds of million of people living in the whole continental area even in the case of activity of volcanoes with sporadic eruptions. Furthermore, due to the wide political distribution of the European territories, major activities of “European” volcanoes may have a worldwide impact (e.g. on the North Atlantic Ocean, West Indies included, and the Indian Ocean).

Our ability to understand volcanic unrest and forecast eruptions depends on the capability of both the monitoring systems to effectively detect the signals generated by the magma rising and on the scientific knowledge necessary to unambiguously interpret these signals. Monitoring of volcanoes is the main focus of volcano observatories, which are Research Infrastructures in the ESFRI vision, because they represent the basic resource for researches in volcanology. In addition, their facilities are needed for the design, implementation and testing of new monitoring techniques. Volcano observatories produce a large amount of monitoring data and represent extraordinary and multidisciplinary laboratories for carrying out innovative joint research.

The current distribution of volcano observatories in Europe and their technological state of the art is heterogeneous because of different types of volcanoes, different social requirements, operational structures and scientific background in the different volcanic areas, so that, in some active volcanic areas, observatories are lacking or poorly instrumented. Moreover, as the recent crisis of the ash in the skies over Europe confirms, the assessment of the volcanic hazard cannot be limited to the immediate areas surrounding active volcanoes. The whole European Community would therefore benefit from the creation of a network of volcano observatories, which would enable strengthening and sharing the technological and scientific level of current infrastructures. Such a network could help to achieve the minimum goal of deploying an observatory in each active volcanic area, and lay the foundation for an efficient and effective volcanic monitoring system at the European level.