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Segreteria di Redazione
Francesca Di Stefano
Tel. +39 06 51860068
Fax +39 06 36915617
Rossella Celi
Tel. +39 095 7165851
redazionecen@ingv.it
MED-SUV 1^th^ YEAR MEETING
NICOLOSI (CATANIA) 7-9 JULY 2014

Editors: Giuseppe Puglisi, Letizia Spampinato, Danilo Reitano, Salvatore Mangiaghi
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Francesco Calvagna  Assistant, Member of the Organizing Committee
Massimo Cantarero  Technician, Member of the Organizing Committee, Logistics
Massimo Cascone  Technician, Member of the Organizing Committee, Editorial Office, Front Desk
Rossella Celi  Technologist, Member of the Organizing Committee, Editorial Coordinator
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Salvatore Mangiagli  Technologist, Member of the Organizing Committee, Web Master and pre-editing on line
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Simona Di Salvo, Antonella Catalano, Luca Pirré La Terra (Servizio Civile Nazionale)

Acknowledgements
Tommaso Caltabiano and Gillian Foulger are acknowledged for their contribution to this volume.

Con la collaborazione di

Comune di Nicolosi
PARCO DELL’ETNA

Revisione e normazione ortoeditoriale
Francesca Di Stefano  Centro Editoriale Nazionale INGV
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Immagine di frontespizio
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MED-SUV Project: First results and Ongoing Activities of WP 5 – Task 5.1
Characterization of the Threatening Phenomena from Space and Ground

Susanna Falsaperla1, Tiziana Apuani2, Mauro Coltelli1, Franck Donnadieu3,
Horst Langer1, Eugenio Privitera1, Giuseppe Puglisi1

1Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Catania - Osservatorio Etno, Catania, Italy
2Dipartimento di Scienze della Terra “A. Desio”, Università degli Studi di Milano, Italy
3Université Blaise Pascal - Observatoire de Physique du Globe de Clermont-Ferrand, Clermont-Ferrand, France

Explosive events, lava-fountains and effusions frequently characterize eruptive activity at Etna. Consequently, the town of Catania and many local municipalities are potentially exposed to ash fallout and lava flows. Besides volcanic hazard, earthquakes and landslides affect this volcanic region as well. The Task 5.1 of the European project “MED-SUV” (Grant Agreement n°. 308665) deals with the observation of these threatening phenomena from space and ground and their characterization and understanding. The Task encompasses six subtasks, which focus on and analyze the aforementioned hazards in terms of their characteristics, duration and spatial dimension:

- Test cases for significant eruptive events have been defined by the subtask 5.1.1. The time span from 2005 to 2011 was chosen for its wealth of eruptive episodes and their well-documented evolution;
- The mapping of eruptive products from satellite data will allow us the improvement of the interpretation and modeling of the mechanisms of cone-forming and lava flow emplacement. This topic is developed in the subtask 5.1.2;
- Multidisciplinary experiments are planned in the subtask 5.1.3, and will be carried out at the North-East Crater in July 2014;
- Another important deliverable is given by tools of data mining proposed by the subtask 5.1.4. These tools will be available for the analysis of parameters of whatever nature (e.g., geochemical, geophysical), providing they are processed in numerical format;
- The subtask 5.1.5 provides a characterization of the volcanic plume and eruptive products, with an integrated analysis of atmospheric, satellite and ground-based measurements, which play an important role in ash-cloud dispersal models;
- The sub 5.1.6 focuses on landslide susceptibility analysis and zoning.

The goal will be to highlight the regional distribution of potentially unstable slopes based on a detailed study of the factors responsible for landslides.