

Final Report - Table 3

Structure and Leaders of RTD Tasks and Sub Tasks

Task number	Task name	Task leader	Sub-Task number	Sub-Task name	Sub-Task leader
2.1	New satellite-based monitoring system	Christian Minet (DLR)			
			2.1.1.	SAR satellite based high resolution data acquisition system	Christian Minet (DLR)
			2.1.2.	Quantifying the influence of volcanic plumes on SAR images	Marcello de Michele (BRGM)
2.2	New ground-based monitoring systems	(INGV)			
			2.2.1.	New data logger	Massimo Orazi (INGV)
			2.2.2.	Development of FBG strain sensors and acoustic sensor	Nicolò Beverini (MATEC)
			2.2.3.	Implementation of a tool for integrating and analysing thermal and visible images	Maria Marsella (Surveylab)
Task	Task name	Task leader	Sub-Task	Sub-Task name	Sub-Task leader

number			number		
3.1	EO data processing fine tuning	Antonio Pepe (CNR-IREA)			
			3.1.1.	X-SAR time series	Antonio Pepe (CNR)
			3.1.2.	Optical data	Malvina Silvestri (INGV)
			3.1.3.	SAR single interferograms	Sven Borgstrom and Francesco Guglielmino (INGV)
3.2	In-situ data processing	Danilo Reitano and Giovanni Scarpato (INGV)			
			3.2.1.	In-situ geodetic data	Giuseppe Puglisi and Alessandro Bonforte (INGV)
			3.2.2.	Geochemical and thermal data	Giuseppe Salerno and Salvatore Giammanco (INGV)
			3.2.3.	Visible/IR image	Silvia Scifoni and Emilio Pecora (INGV)
			3.2.4.	Other in-situ data	Laura Beranzoli, Flora Giudicepietro, Salvatore Spampinato, Danilo Reitano and Roberto Scarpa (INGV)
3.3	Data integration	José Fernandez (CSIC)			
			3.3.1.	Integrated ground deformation measurements	Francesco Guglielmino (INGV)
			3.3.2.	Atmospheric water vapour content	Claudia Spinetti (INGV)
			3.3.3.	SO ₂ retrieval	Mike R. Burton (INGV)
			3.3.4.	Lava flow evolution maps	Maria Marsella (SurveyLab)
			3.3.5.	Volcanic plume	Simona Scollo (INGV)
3.4	Multidisciplinary interoperability infrastructure	Stefano Nativi (CNR-IIA)			
			3.4.1.	System analysis	Pierre Philippe Mathieu (ESA)/ Fawzi Doumaz (INGV)/

					Stefano Nativi (CNR)/ Danilo Reitano
			3.4.2.	Interoperability gaps	Pierre Philippe Mathieu (ESA)/ Fawzi Doumaz (ESA)/ Stefano Nativi (CNR)/ Danilo Reitano (INGV)
			3.4.3.	MED-SUV infrastructure architecture design	Fabrice Brito (T2)/ Pierre Philippe Mathieu (ESA)/ Fawzi Doumaz (INGV)
			3.4.4.	MED-SUV infrastructure development	Fabrice Brito (T2)/ Pierre Philippe Mathieu (ESA)/ Danilo Reitano (INGV)
Task number	Task name	Task leader	Sub-task number	Sub-task name	Sub-task leader
4.1	Characterisation of the state of the volcano	Gaetano Festa (AMRA)			
			4.1.1.	Systematic geochemical data collection	Giovanni Chiodini (INGV)
			4.1.2.	Periodic surveys with a Multi-type gas station	Roberto Moretti (AMRA)
			4.1.3.	Survey for studying pressure transients in fluid reservoirs	Heiko Woith (GFZ)
			4.1.4.	Automatic analysis and anomaly detection	Luca D’Auria (INGV)
			4.1.5.	Seismic detection, location and tracking of medium changes in the shallow hydrothermal system beneath the volcano	Gaetano Festa (AMRA)
			4.1.6.	Detection of ULP deformation signals	Roberto Scarpa (AMRA)
4.2	Characterisation of the sub-	Jean Vandeleubrouck			

	surface processes and structures	(CNRS)			
			4.2.1.	Resistivity-based techniques for Campi Flegrei and Somma-Vesuvius hydrothermal systems	Anthony Finizola (CNRS)
			4.2.2.	Assessment of rock permeability and its relation to explosion probability	Bettina Scheu (LMU)
			4.2.3.	Determination of 3D density structure of the crust	José Fernandez Torres (CSIC)
4.3	Theoretical deformation models and inversion / interpretation methodologies	Luca D'Auria (INGV)			
			4.3.1.	Modelling of internal dynamics of magmatic sources and their effect on surface deformation and gravity field	Chiara Montagna (INGV)
			4.3.2.	Modelling and interpretation of surface deformation	Luca D'Auria (INGV)
			4.3.3.	Modelling of geochemical data	Zaccaria Petrillo (INGV)
			4.3.4.	Coupled fluid flow and stress evolution at active collapse caldera	Joachim Gottsmann (UNIBRIS)
Task number	Task name	Task leader	Sub-task number	Sub-task name	Sub-task leader
5.1	Characterisation of the threatening phenomena from space and ground	Susanna Falsaperla (INGV)			

			5.1.1.	Test cases for significant events	Giuseppe Puglisi (INGV)
			5.1.2.	Effusive eruptions and products	Mauro Coltelli (INGV)
			5.1.3.	Multiparametric experiment for gas dynamics definition	Eugenio Privitera (INGV)
			5.1.4.	Multiparametric data mining	Horst Langer (INGV)
			5.1.5.	Volcanic plume and eruptive products	Franck Donnadiou (UBP-LMV)
			5.1.6.	Landslides	Tiziana Apuani (UMIL)
5.2	Mt. Etna dynamics	Patrick Allard (CNRS)			
			5.2.1.	Magma storage, ascent and degassing	Patrick Allard (CNRS)
			5.2.2.	Stress transfer and interaction between faults and the magmatic/hydrothermal system	Eleonora Rivalta (GFZ)
			5.2.3.	Physical and analogue laboratory experiments on ash aggregation	Piergiorgio Scarlato (INGV)
5.3	Mt. Etna structure	Jesus Ibanez (UGR)			
			5.3.1.	Investigation of the Etna structure by an active source experiment	Jesus Ibanez (UGR)
			5.3.2.	High-resolution 3D vs. 4D seismic velocity and attenuation tomography	Gillian Foulger (UDUR)
			5.3.3.	Seismic anisotropy	Francesca Bianco (INGV)
			5.3.4.	Investigation of cortical structures, through borehole experiment	Luciano Zuccarello (INGV)

			5.3.5.	Constraints from gravity and other data	Daniele Carbone (INGV)
			5.3.6.	Liability of basement rocks to contact metamorphism	Kai-Uwe Hess (LMU)
5.4	Models and software	José Fernandez (CSIC)			
			5.4.1.	Harmonization for data, algorithms I/O and visualisation	Pierre Briole (CNRS)
			5.4.2.	Consensus 3D model of Etna	Marco Aloisi (INGV)
			5.4.3.	Local scale models: dike, faults and landslides	Virginie Pinel (CNRS)
			5.4.4.	Global scale models	Alessandro Bonforte (INGV)
			5.4.5.	Near real time deformation modelling	Flavio Cannavò (INGV)
Task number	Task name	Task leader	Sub-Task number	Sub-Task name	Sub-Task leader
6.1	Volcanic hazard assessment at Campi Flegrei	Jacopo Selva			
			6.1.1.	Long-term hazard assessment	
			6.1.2.	Hazard changes induced by monitoring observations	
			6.1.3.	Short-term hazard tools	
6.2	Volcanic hazard assessment at Etna volcano				
			6.2.1.	Hazard tools induced by monitoring observations at Etna	
			6.2.2.	Short-term hazard from lava flows at Etna	Ciro Del Negro (INGV)
			6.2.3.	Short-term hazard from	Simona Scollo (INGV)

				tephra fallout at Etna	
6.3	Capacity building and interaction with decision-makers				
			6.3.1.	Capacity building	Rosella Nave (INGV)
			6.3.2.	Quantitative decision-making protocols	
			6.3.3.	End users evaluation	
Task number	Task name	Task leader	Sub-task number	Sub-task name	Sub-task leader
7.1	Requirements and design of the operational scenario and experiments, and feedback with experiences from other European volcanic countries	Patrick Allard (CNRS)			
7.2	Mid-term Pilot Phase	Flora Giudicepietro (INGV)			
			7.2.1.	Campi Flegrei-Vesuvius	Flora Giudicepietro (INGV)
			7.2.2.	Etna	Daniele Carbone (INGV)
7.3	Transfer of outcomes to the other WPs and application to the two volcano test sites (Fournaise and Azores)	Teresa Ferreira (CIVISA)			
			7.3.1.	Piton de la Fournaise	Patrick Allard (CNRS)
			7.3.2.	Azores	Teresa Ferreira (CIVISA)
7.4	Final Pilot Phase	Daniele Carbone (INGV)			
			7.4.1.	E-infrastructure	Stefano Nativi (CNRS)
			7.4.2.	Campi Flegrei –Vesuvius	Flora Giudicepietro (INGV)
			7.4.3.	Etna	Daniele Carbone (INGV)