Final Report - Table 6

Project Deliverables

n.	Deliverable title	Lead partner	Contributing partners	m/p (estimated/ actual)	Delivery Time (month)	Role of each partner	Contents
D1.1	Project Quality Plan	INGV	INGV	2.00 / 3.64	2	INGV entirely implemented the Deliverable. AMRA contributed to the revision.	This document specifies the guidelines and rules for implementing the deliverables of the Project, as well as any other document needed for the correct development of the Project, and managing unexpected events that might delay or affect the quality of the Project products.
D1.2	MED-SUV Data Policy Guidelines	INGV	INGV CNR DLR LMU GFZ UDUR CNRS BRGM CSIC UGR Surveylab MATEC T2 Western USGS UBP-LMV UAC	5.00 / 7.18	6	INGV entirely implemented the Deliverable. The contributing partners, on voluntary base, formed a team that revised the data policy guidelines.	The purpose of this deliverable is to provide a report on the first version of the data policy, on the study of its suitability amongst MED-SUV partners and, on the main outcomes within the first six months of the project.
D1.3	Activities Vs. Expenditures Report	INGV	INGV and all	9.00 / 18.68	12	INGV entirely implemented the Deliverable. All participants provided their contributions about the expenditures and the activities , this last through the WP leaders.	This deliverable reports on the RTD activities carried out by WP2 to WP7 in the first 12 months of the project life. The aim of the deliverable is of comparing the expenditures declared by each of the project participant with respect the activities performed. For the purposes each participant as well as work package has contribute to this deliverable providing both scientific and financial reports. The deliverable content, updated to month 18, will contribute to the First Reporting for the EC. Furthermore, activities of WP1 and WP8 are also shortly reported.
D1.4	Midterm Activities Vs. Expenditures Report	INGV	INGV and all	9.00 / 11.35	24	INGV entirely implemented the Deliverable. All participants provided their contributions about the activities through the WP leaders.	The aim of the deliverable is of comparing the expenditures declared by each of the project participant with respect the activities performed in the second year project. However, as the official reporting period of M18 covered already the first six months of the second year, here we considered only the last six. Thus, the deliverable reports on the RTD activities carried out by WP2 to WP7 in the months between M19 and M24. In addition, the activities of

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							WP8 are also shortly reported. As far as the financing aspect is concerned, and differently from the previous D1.3, we are not providing details as all of the RTD activities carried out between M19 and M24 did not benefit of the second tranche of the financing, which was not transferred at the date of the implementation of this deliverable.
D1.5	Strategic and Legal Deliverables	INGV	INGV	13	36	INGV entirely implemented the Deliverable. The Advisory Board reviewed the document.	It summarises and classifies all the project's outcomes and strategically proposes a way for both protecting the foreground owner-ship and IP during the exploitation phase and maintaining some of the products. the deliverable is composed of three distinct and inter-connected documents. The first document is a data policy proposal for the European Supersites. The second document is the Exploitation Agreement which defines and rules the project foreground and its exploitation after the end of the project, when the Consortium Agreement will no longer be in force. The third document is a proposal for a Memorandum of Understanding (MoU) among those partners involved in the maintenance of the systems allowing the acquisition and sharing of data and information concerning the Italian Supersites.
D2.1	New Monitoring and Observing Systems	DLR	DLR BRGM INGV MATEC Surveylab	13.00 / 9.24	6	DLR edited and contributed to the Deliverable. The contributing partners described the respective activities	This Deliverable reports the work effort of the first 6 months on the planning and the design of the systems and activities. Additionally to that, it report also the results of tasks that already carried out or prepared first tests of the systems and/or parts of it.
D2.2	Progress report on the data logger and SAR detection of volcanic plumes	INGV	INGV BRGM	6.00 / 0.80	18	INGV edited and contributed to the Deliverable. BRGM described its activity.	In the deliverable the Sub-Task 2.1.2 and Sub-Task 2.2.1 summarize the progress on the data logger upgrade and SAR detection of volcanic plumes activity, towards the objectives of the project and highlight the results.
D2.3	NETVIS prototype	SURVEYLAB	Surveylab INGV-CT	28.00 / 19.30	18	SurveyLab was the editor. Together with INGV contributed to the Deliverable.	It reports the design and test of the algorithms for implementing a system aimed at optimizing and extending the existing permanent ground NEtwork of Thermal and VIsible Sensors located on Mt. Etna (Etna_NETVIS) and to improving the observation of the most active areas, for monitoring surface sin-eruptive processes.
D2.4	TerraSAR-X system and FBG prototypes	DLR	DLR MATEC INGV	40.00 / 43.12	36	DLR edited and contributed to the Deliverable. MATEC and INGV described its activity.	This deliverable presents two different prototypes. The first part of the Deliverable describes Automated SAR satellite based High resolution Data Acquisition System, which was developed and implemented at DLR. The following part describes the development of the strain sensors based on Fiber Bragg Grating, which happened at MATEC in collaboration with INGV.
D2.5	WP2 final report	DLR	DLR BRGM INGV MATEC Surveylab	25.80 / 63.59	36	DLR edited and contributed to the Deliverable. The contributing partners described the respective activities	This deliverable summarizes all the activities carried out in WP2 during the MED-SUV project. All the developed sensors, systems and algorithms are described in following chapters dedicated to each Sub-Task of the Work package:
D3.1	Guidelines for data fusion, integration and sharing	INGV	INGV Surveylab AMRA	36.00 / 14.970	6	INGV: reports on "in situ", EO data and interoperability infrastructure. SURVEYLAB: report on lava flow evolution maps	The deliverable D3.1 aims at reporting the data fusion environment project, the principles of data integration and algorithms, requirements of users and of the system for

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			CNRS				interoperability. Moreover, the deliverable details the products (kind of data, associated metadata, formats, protocols, and accessibility to data) and the requirements needed for data fusion and sharing; as well as the design of the interoperability architecture.
D3.2	Data integration SW design	CISC	INGV Surveylab CSIC DELTAG	40.00 / 44.22	12	INGV and DeltaG: integration of ground deformation measurements, INGV: procedures for the determination of the atmospheric water vapour content ,SO2 retrieval, volcanic plume and Etna camera network SURVEY LAB: Procedures for determining lava flow evolution maps CSIC: compilation and description of previous research results important for the integration SW design for deformation.	This document includes a Report on the architecture design of the Input and Processing SW for EO and terrestrial data integration modules for deformation, atmospheric artefacts on SAR signal, gas emissions, lava flow evolution maps and volcanic plume studies. For each parameter a description of the work done, or/and to be done, is given as well as description of improvements and time schedule approximation.
D3.3	System and gap analysis	CNR	CNR INGV ESA	20.00 / 22.64	12	CNR: design of the interoperability system and gap analysis; EO data products INGV: "In situ" data products.	This deliverable identifies the interoperability systems for harmonizing the discovery of and access to data products. It proposes an advanced interoperability architecture implementing a system of systems based on a brokered architecture. A roadmap towards the implementation is proposed and the first interoperability tests were conducted for the available local systems.
D3.4	EO data processing and distribution	CNR	CNR INGV	30.00 / 36.24	24	CNR: generation of time-series of deformation. INGV: analyses on optical data and provided analyses on single SAR interferograms	This report summarizes the outcomes of the Task 3.1. It is devoted to the generation and distribution of products from EO data processing. First of all, the "fine tuning" of used EO processing chains, as well as a preliminary study aimed at identifying proper data formats and specific interfaces for the delivering of EO data products to other WPs, were conducted. Three different activities are reported: a) the generation of time-series of deformation and inherent mean displacement velocity maps for the two Supersite ; b) the real-time acquisition of EO optical images (AVHRR, MODIS) by the INGV antennas; c) the production and analysis of single DInSAR interferograms.
D3.5	In-situ data processing and distribution	INGV	INGV	30.00 / 5.57	18	INGV: collection and analysis of information about available "is situ" datasets	This deliverable contains this information for 19 different datasets having a highly heterogeneous nature (seismic, geodetic, geochemical, volcanological). The contribution of INGV was largely in-kind.
D3.6	Final release of integration procedures and software	CSIC	CSIC INGV Surveylab UNIWO	22.00 / 59.77	30	CSIC, INGV, UNIWO: Research on integration procedures. Description of results important for final release of integration procedures and SW for deformation and edition of deliverable. INGV: atmospheric water vapour content, SO2 retrieval, volcanic plume SURVEY LAB: lava flow evolution maps	This document includes a report on final release of the procedures and software prototypes implemented in the Task 3.3 for EO and terrestrial data integration modules for deformation, atmospheric artefacts on SAR signal, gas emissions, lava flow evolution maps, and volcanic plume studies.
D3.7	MED-SUV e-infrastructure	CNR	CNR INGV	40.00 / 43.61	30	CNR: design and implementation of the interoperability infrastructure INGV: design of the portal	This deliverable describes the e-Infrastructure, based on a brokering architecture. The data sources identified in D3.4 and D3.5are partly available from existing data systems; for those not available, a specific repository has been realized. All the heterogeneous data sources have been connected to the MED-SUV multidisciplinary interoperability infrastructure, extending the brokers, where needed. A Web Portal including a geospatial portal has been developed and connected to the infrastructure.
D3.8	3D integrated deformation maps (SW)	T2	T2 INGV	23.86 / 34.10	33	T2: integration of the SISTEM software within GEP INGV: implementation of the SISTEM software	The purpose of this deliverable is to report on the development of software products (SISTEM), the software description and the software implementation (Portal integration via the Geohazards

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							Exploitation Platform).
D4.1	First report on the WP4 campaigns	INGV	INGV AMRA CSIC GFZ	25.00 / 43.01	12	AMRA: Surveys with a Multigas-type station. Seismic detection, location and tracking of medium changes in the shallow hydrothermal system beneath a volcano; Magnetotelluric study of the Solfatara-Pisciarelli-Agnano area; Detection of ULP deformation signals; Collection of high sensitivity strainmeter and tiltmeter data CSIC: Compilation of data and software available. First processing results. Description of the research and data available for the determination of the 3D density structure of the crust in the CF and Vesuvius areas GFZ : Fluid pressure transients, Ambient noise INGV: Systematic geochemical data collection	Chemical and isotopic analysis of Solfatara fumaroles, collected and analysed during this period, show the continuation of previously observed trends. In the frame of the surveys for studying pressure transients in fluid reservoirs, the first period of MED-SUV was devoted to the installation of 4 temperature-water level sensors in selected points of Solfatara and Agnano areas. The initial phase of RICEN (Repeated InduCed Earthquakes and Noise, i.e. active and passive seismic experiment) took place from 23 to 26 September 2013 in the Solfatara zone. Data recorded at the borehole strainmeters systems installed at Campi Flegrei have been processed and compared with other available geophysical data. Preliminary tests for the determination of the 3D density structure of the crust were done.
D4.2	Campi Flegeri resistivity model	CNRS	CNRS AMRA	6.00 / 14.00	12	CNRS: Electric Resistivity Tomography of Campi Flegrei and Vesuvius AMRA: Audio-Magnetotelluric resistivity model of Solfatara-Pisciarelli-Agnano area	This Deliverable reports the results of three geophysical surveys in the Campi Flegrei and Vesuvius areas. The first two contributions are aimed at defining the resistivity models in the Solfatara-Pisciarelli area (Campi Flegrei) by carrying out electrical resistivity, carbon dioxide flux, self-potential and magnetotelluric measurements. The third contribution reports the outcomes of the Electrical Resistivity Tomography, Self-potential, Temperature and diffuse degassing surveys performed on the Vesuvius.
D4.3	Algorithms development	AMRA	AMRA INGV GFZ CNRS	11.00 / 22.56	18	AMRA: Detection of LP seismic signals and ULP deformation signals.4D tomography INGV: Automatic analysis and anomaly detection GFZ: Ambient noise imaging CNRS: Variation in the scattering properties of the medium	The methodologies reported in this deliverable represent innovative tools for 4D (space and time) geophysical monitoring of the volcano evolution. They are based on the characterization and use of the ambient background noise, on the use of repeated measurements (both active and passive) to track the evolution of the structure and on the capability to detect the variety of seismic and deformation events occurring within the rapid changes of the volcanic structure, with the goal of diminishing the detection threshold.
D4.4	Mid-term report on the WP4 campaigns	GFZ	GFZ AMRA CNRS CSIC INGV	25.00 / 30.84	24	GFZ: Fluid pressure transients, Ambient noise AMRA: Periodic surveys with a Multigas-type station, Seismic detection location and tracking of medium changes in the shallow hydrothermal system beneath a volcano; Magnetotelluric study of the Solfatara-Pisciarelli-Agnano area; Detection of ULP deformation signals; CNRS: Electric Resistivity Tomography of Campi Flegrei, Vesuvius and Etna CSIC: Updating of the inversion results using upgraded software. Description of the research done and results obtained in the determination of the 3D density structure of the crust in the CF and Vesuvius area including updated results INGV: Systematic geochemical data collection.	Geochemical data show a trend of increasing magmatic components since the year 2000. A portable multi-component gas analyser system was applied to measure the concentrations of major volcanic gas species in Solfatara volcano and in Pisciarelli area. 8 monitoring sites were established to monitor pressure transients across the hydrothermal plume below Solfatara. Temporal variations of water temperature and water level are monitored along an EW-profile from Agnano to Fangaia. Third phases of RICEN has been carried out. The processing of the data is ongoing. ULP deformation signals (strain and tilt) revealed strain episodes in 2006, 2010, and 2012 associated with microseismicity activity. Electric resistivity tomography (ERT), CO2 flux, ground temperature and self-potential (SP) survesy jhave been carried out to image the shallow hydrothermal system of Solfatara.
D4.5	Test of CICA	AMRA	AMRA	7.00/8.00	24	Execution of all work	Implementation of an Independent Component Analysis based approach for the Blind Source Separation of convolutive mixtures for managing massive data in quasi real time.

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D4.6	Models of magmatic and hydrothermal systems	INGV	INGV CSIC CNR	20.00 / 31.04	24	INGV and CNR: Modelling of dynamics of magmatic and hydrothermal sources and their effect on surface deformation and gravity field. CSIC: 3D density structure of CF and Vesuvius, methodology used and results obtained.	This deliverable includes structural studies, models of the magmatic and of the hydrothermal system and the interpretation of observed geophysical and geochemical signals.
D4.7	Geophysical filtering	AMRA	AMRA	3.00 / 3.00	30	Execution of all work	Implementation of a software package for removing noise from deformation signals, detection of ULP signals
D4.8	Fluid flow and rocks mechanics model	UNIBRIS	UNIBRIS	38.00 / 41.16	36	Execution of all work	The deliverable is focused on the simulation and evaluation of coupled fluid flow and mechanical modelling on the short-term (minutes to months) in a mechanically heterogeneous crust in view of providing a knowledge base for operational purposes.
D4.9	Final report on the WP4 campaigns	INGV	AMRA CSIC INGV GFZ CNRS	25.00 / 28.15	36	AMRA: Seismic medium velocity changes, Periodic surveys with a Multigas-type station. Magnetotelluric study of the Solfatara-Pisciarelli-Agnano area. CSIC: 3D density crust structure INGV: Geochemical and Multigas data GFZ: Pressure transients in fluid reservoir CNRS: Resistivity based technique	Systematic geochemical measurements and analyses were performed for the chemical and isotopic composition of the Solfatara and Pisciarelli fumaroles. Several acquisition campaigns were performed using a portable Multigas-type station with the aim of quantifying the gas fluxes and analyse the gas species, from the main plumes that characterize the Solfatara crater and the Pisciarelli site. The study of pressure transients in fluid reservoirs has been performed through continuous pressure monitoring at geothermal wells in Campi Flegrei , by analysing the RICEN data set. Velocity and attenuation images, by analysing the RICEN data set, were obtained through several different approaches. Electrical Resistivity Tomography (ERT) profiles have been performed, finalizing the 3-D resistivity model of the shallow structure of Solfatara volcano. The time-lapse resistivity experiment has proven to be a promising tool for monitoring. Moreover, a map of the attenuation of the seismo-electromagnetic signals inside Solfatara has been estimated. Also the structural setting of Campanian Plane has been studied by means of a 3D inversion of gravity data.
D4.10	Method for inverting geodetic data	CSIC	CSIC INGV Western	14.95 / 6.50	36	The three partners did the work closely, in synergy with D5.9.	Improvement, implementation and application of an inversion methodology able to invert simultaneously geodetic gravity changes and displacement data (from space and/or terrestrial origin), determining sources for pressure and mass changes for the same area, working in a 3-D nonlinear context and within a free geometrical global fit.
D4.11	Rock permeability and explosion probability	LMU	LMU	12.00 / 15.00	36	Execution of all work	The Deliverable Reports on the experiments aimed at quantifying the permeability of natural rocks sampled on Campi Flegrei fumaroles as a function of several conditions (P, T, strength of country rock).
D5.1	Mt. Etna test cases	INGV	INGV CNRS UBP-LMV CSIC	14.00 / 12.11	6	INGV: Development of the criteria to adopt to select test cases of Mt. Etna eruptive activity/periods of quiescence to be investigated throughout the project and on their main features and selection of test cases & editor; CNRS: Participation on the development of the criteria & Reviewer; UBP-LMV: contributors CSIC: Participation on the development of the criteria.	This Deliverable reports on characteristic events, such as dike injections, explosive and effusive phases, earthquakes, and their main features to be used along the Work Package 5 activity fulfilment. Furthermore the Deliverable provides an overview on the organisation and timetables of the TOMO-ETNA seismic experiment plan.
D5.2	WP5 harmonisation and standards	CNRS	CNRS INGV	6.00 / 4.46	6	CNRS: editor; INGV: reviewer	This deliverable contains a list of standards (geodetic reference frame, units, colour scales, a priori fault map and structural mesh, …) that will be shared by the WP5 team members.
D5.3	SW tools for data mining	INGV	INGV	2.96 / 2.08	12	Execution of all work	This deliverable contains a short description of software tools that can be used for data mining. The tools comprise various techniques of pattern recognition as well as procedures for the extraction of

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							features. The software aims at handling objects defined on numerical data of different origin (such as seismic, acoustic, geochemical or other).
D5.4	Report on the TOMO-Etna experiment	UGR	UGR INGV GFZ	26.00 / 44.62	18	UGR: Preparation of the experiment, coordination of the experiment, participation in the experiment, data analysis, report writing, 3D velocity structure of Mt. Etna model; INGV: Preparation of the experiment, participation in the experiment, data analysis, 3D velocity structure of Mt. Etna model; GFZ: Preparation of the experiment, participation in the experiment, data analysis.	The deliverable provides the full information associated to the TOMO-ETNA experiment. This experiment was focused on the base of generation and acquisition of seismic signal (active and passive) in Mt. Etna volcano and surrounding area. The active phase of the experiment started on June 2014 and finished on November 2014. The appendix of the deliverable details the whole activities: preparatory, in field and during the oceanic cruises.
D5.5	Fieldwork and multidisciplinary experiments on gas dynamics and ash aggregation	INGV	INGV LMU CNRS	8.00 / 14.25	18	The three partners implemented the deliverable closely.	This deliverable contains a short description and a report on gathered data and results of three experiments, carried out at Mt. Etna and in laboratory.
D5.6	Constraints on the structure of Mt. Etna	LMU	LMU INGV	6.00 / 12.28	24	The two partners implemented the deliverable closely.	The activity was conducted to map out data on rock strength, P-wave velocity and porosity of the highly variable sedimentary sequence below Etna and serves to better constrain the structure underneath Etna.
D5.7	Gas budget	CNRS	CNRS INGV UBP-LMV	9.00 / 13,71	24	The three partners implemented the deliverable closely.	This deliverable D5.7 of the sub-task WP5.2.1 reports on the main results obtained from researches on: a) the chemistry and volatile content of primitive basalts erupted by Etna over the past 15 kyr; b) the solubility and degassing behaviour of sulphur in Etna magma; c) the gas emission budget of Etna over the period 2005-2011; d) radioactive tracers in Etna volcanic plume and implications for the magma residence time and the gas transfer time; e) electrical resistivity sounding of Etna's hydrothermal system; and f) the physical properties of sediments underlying Etna and their potential implications for magma-sediment interactions.
D5.8	Stress and strain transfer	INGV	INGV CSIC CNRS UMIL GFZ	32.00 / 40,86	24	INGV: editor; CSIC and INGV: Updating of the Mt Etna subsurface structure obtained from gravity data using available existing and new obtained ones using upgraded software. UMIL: analysis of geomechanical data, laboratory ultrasonic tests on rock samples, implementation of the database of the geomechanical properties of Etna materials, susceptibility maps. CNRS and GFZ: implementation of theoretical models for study the stress-strain transfer.	This Deliverable reports the following activities: a) the landslide susceptibility analysis of the area close to the Pernicana fault (Etna NE) was carried out and a relevant map was implemented; b) implementation of a numerical model for analysing the factors influencing dike propagation, specifically the arrest of dikes and the focal mechanisms of the induced earthquakes; c) assessment and inversion of a new gravity data set, by merging data acquired in the eighties during surveys and data collected by INGV for monitoring purposed during 1994 to 2001, d) dynamical magma propagation modelling in 2D and evaluation of the effect of the topography.
D5.9	Prototype of a deformation modelling	CSIC	CSIC INGV	5.00 / 8.10	24	The two partners implemented the deliverable closely.	The Deliverable reports the implementation and application of an inversion methodology able to invert near-real time deformation data (from space and/or terrestrial origin), determining sources for pressure and mass changes for the same area, working in a 3-D nonlinear context and within a free geometrical global fit. Edition of the deliverable. Description of the methods and results obtained;
D5.10	Global structural model of Etna	INGV	INGV UGR CNRS	27.00 / 53,30	36	INGV, editor; CNRS, reviewer INGV, UGR, LMU and BRGM, worked closely on the analysis and integration	This deliverable is aimed at summarizing the outcomes of different studies carried out in the frame of WP5 activities (Sub Tasks 5.3.1, 5.3.2, 5.3.3, 5.3.4, 5.4.2), focused on the assessment of a new

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			LMU UDUR BRGM			of the TOMO-ETNA data. UDUR performed the 4D analysis of seismic data	structural reference model of Mt. Etna. Most of activities are linked to the analysis of the data produced during TOMO-ETNA experiment. This 3D mesh was tested in a viscoelastic/plastic environment.
D5.11	Characterization of volcanic processes	CSIC	CSIC, INGV CNRS UGR UBP-LMV GFZ, UNIWO UoM USGS	55.00 / 55,01	36	CSIC: Editor & Research on the topic (see previous deliverables and deliverables of WP3 and 4) and edition of the deliverable; UNIWO: Research on the topic (see previous deliverables and deliverables of WP3 and 4) and edition of the deliverable; CNRS: reviewer; Others: contributors	This document is dedicated to the characterization of volcanic processes. It contains the final report on the models and parameters relevant to internal and surface volcanic processes. Models of the discharge rate trend of effusive products (ST 5.1.2) and volcanic plumes (ST 5.1.5), magma storage (ST 5.2.1) and stress transfer (5.2.2). Benchmarks for parameters characterization (ST 5.1.4) and modelling of internal volcanic processes, sharing of local 2D and 3D models including as realistic as possible rheological parameters and structure, along with stress-strain analysis of critical sites for landslide phenomena (ST 5.4.3, ST 5.4.4).
D6.1	Short-term hazard assessment tool for Etna	INGV	INGV	27.00 / 33,22	36	INGV conceived the method for short-term probabilistic volcanic hazard assessment from tephra fallout, implemented it, applied it to Mt Etna, and wrote the deliverable	In this deliverable we describe the development of BET_VH_ST, a probabilistic model for the assessment of volcanic hazard in the short-term (hours to days) fully developed in MED-SUV project. We then describe the first preliminary application of this model to Mt Etna volcano. It also includes the design of two maps showing the spatial probability of vent opening during summit and flank eruptions at Mt Etna. Finally, it includes simulations of tephra dispersal for the two classes of eruptive activity (summit and flank), based on wind statistics.
D6.2	Short-term hazard assessment tool for Campi Flegrei	INGV	INGV AMRA BRGM	27.00 / 46,50	36	INGV conceived the method for short-term probabilistic volcanic hazard assessment from tephra fallout, implemented it, applied it to Campi Flegrei and wrote the deliverable; AMRA, in cooperation with WP4, have defined a new 3D multiparametric geophysical model for the Campi Flegrei caldera, that will be useful to upgrade the probabilistic model for the next vent position; BRGM investigated the applicability of the Value of Information theory and performed sensitivity analyses on parameters from monitoring.	In this deliverable we describe the development of BET_VH_ST, a probabilistic model for the assessment of volcanic hazard in the short-term (hours to days) fully developed in MED-SUV project. We then describe the first real-time application of this model, which has been carried out within MED-SUV during the Campi Flegrei simulation exercise organized by VUELCO project in February 2014. We give details on how the model has been set up and run for assessing the hazard from tephra accumulated at the ground for the first 3 days after each bulletin released in the course of the simulation. We also show the results obtained in the last phase of the simulation, as an example of what such type of probabilistic model can provide. Finally, we describe the BET_VH_ST software implementation made for operative purposes that has been installed in the control room of Osservatorio Vesuviano.
D6.3	Preparedness and awareness guidelines	INGV	INGV DPC CIVISA	28.70 / 14,44	36	INGV and DPC collect information about decision-makers and their needs in case of volcanic unrest (Capacity building); INGV performed an illustrative Cost-Benefit analysis example at Campi Flegrei; INGV and CIVISA applied an evaluation/validation procedure to provide a robust evaluation of the volcanic maps and its validation resulting from end users response	In this deliverable we describe the development of procedures and activities finalized to improve the communication between scientists and decision makers. The methodology was based on testing and enhancing communication efficacy of scientific outputs, as maps, taking into account opinions and needs of the different stakeholders, in order to contribute in filling the gap between scientists and decision-makers.
D7.1	Planning of the WP7 activities	CNRS	CNRS, INGV, SurveyLab	15.00 / 3.13	12	The three partners implemented the deliverable closely. The contributions of CNR and AMRA was in kind	The deliverable provides information on the meetings organised in order to discuss the WP activity schedule, and on the distinct phases of WP7 work plan.
D7.2	Mid-term pilot phase	CNRS	CNRS,	28.00 / 22.64	18	The partners implemented the deliverable closely.	This deliverable reports on the Mid-term pilot phase carried out by

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			INGV, CIVISA, SurveyLab, MATEC, T2				WP7. The tests were carried out at the two Supersite areas Campi Flegrei/Vesuvius and Mt. Etna using the instrumentation developed by Sub-task 2.1.1, Sub-task 2.2.1, and Sub-task 4.1.2, and Sub-task 2.2.2, Sub-task 2.2.3, Sub-task 3.3.1, respectively
D7.3	Transfer from/to Piton de la Fournaise and Azores	CIVISA	INGV DLR CNRS BRGM CNR SurveyLab, T2	23.00 / 21.18	30	The partners implemented the deliverable closely.	In this Report we summarize the progress achieved on WP7's Task 7.3 dealing with the Transfer of project outcomes to other European volcano Observatories and, in particular, on the two volcano test sites selected in the Description of Work: Piton de la Fournaise (Reunion Island, France) and the Azores archipelago (Portugal).
D7.4	Final Pilot Phase	CNRS	INGV, DLR, CNRS, BRGM, CSIC, CNR, SurveyLab MATEC T2	26.60/43.13	36	The partners implemented the deliverable closely.	The present report summarizes the main achievements validated during the Final Pilot Phase of MED-SUV (Task 7.4), with details given for Sub-Tasks 7.4.1, 7.4.2 and 7.4.3. WP7's activities for the transfer of MED-SUV outcomes and main achievements are outlined. Meeting WP7 meetings and dissemination activities are also listed. The final WP7 meeting, involving partners from all WPs, was held on 23-25 February 2016 in Ponta Delgada, Azores (Portugal).
D8.1	Opening workshops	INGV	All	5,00 / 0,79	1	INGV organized the event; all participants attended to the meting	Kick-off meeting of the project
D8.2	MED-SUV website	BRGM	BRGM INGV	10.00 / 3,05	2	BRGM ensured the creation and updating of the website INGV reviewed the structure.	Implementation of the public website of the MED-SUV project. The website show the description of the project, the main products and it is the access to the Collaborative Area.
D8.3	Informational factsheets	BRGM	BRGM INGV	5.00 / 1.41	2	BRGM and INGV worked together on different parts of the text	3 periodic issues of the factsheet during the project. The documents summarize the main point of the activity of the project.
D8.4	Communication plan	BRGM	BRGM DPC INGV	5.00 / 1.16	3	DPC and INGV reviewed D8.4	This document provides key points for the dissemination of the outcomes expected in the project. It identifies the target audiences to whom results and information on the MED-SUV project might be of great relevance and selects the appropriate communication vehicles to be used. It also defines the adequate competences and responsibilities (among the project consortium members) regarding particular dissemination objectives, and outlines an appropriate schedule and scans for possible joint communication actions to be undertaken with other projects regarding the research topic.
D8.5	MED-SUV video	INGV	INGV ESA	10.00 / 1,90	6	INGV realised and revised the video in cooperation with ESA.	This video is one of the deliverables foreseen in the First Reporting Period of the project. The first version was issued on January 2014. During the revision of the First Reporting Period, EC rejected the first version, so that a new version of the video was requested. The current version deeply revised the first version, in order to emphasize the relevance of the project, the impacts of its outcomes and the role of INGV (as in-situ data providers) and Space Agencies in the management of the Supersites and – more generally – of the geohazards.

n.	Deliverable title	Lead partner	Contributing partners	m/p (estimated/ actual)	Delivery Time (month)	Role of each partner	Contents
D8.6	Leaflets	BRGM	BRGM INGV DPC DLR CIVISA	3,00 / 4,58	24	BRGM prepared the leaflet content and illustrations + Editing for all languages and implementation of corrections. BRGM ensured French, Spanish and first Italian translations. INGV ensured review of English version. INGV and DPC ensured review of Italian version. DLR ensured German translation. CIVISA ensured review of Portuguese version. The contribution of INGV and CIVISA were in-kind.	"Leaflets published on-line, dedicated to increase awareness to young students, in four languages (English, Italian, French and Portuguese)"
D8.7	Action plan for the sustainability of the dissemination	BRGM	BRGM INGV	3.00 / 1,30	24	BRGM implemented the document. INGV reviewed D8.7	This report analyses the technical solutions available to maintain the impact of MED-SUV dissemination results even after the official end of the project. It discusses how to maintain a high access rate to the scientific products by making them available on different platforms as well as to the website and online documents.
D8.8	Science policy briefs	INGV	INGV BRGM	5,31 / 1,06	32	INGV implemented the document. BRGM reviewed and made propositions on D8.8 content	The document reports the motivations for implementing the two MED-SUV Science Policy Briefs, as well as the structure and specifications of each of the two documents.
D8.9	Final workshop	INGV	INGV BRGM and all	2,50 / 0,55	36	INGV organised the Final meeting in Rome. BRGM prepared the gadgets; all participants attended to the meting.	The final meeting of the MED-SUV was held on 6 and 7 April 2016 in Rome (Italy) at the INGV headquarter. The meeting aimed at officially summing up and discuss the project activities carried out so far and their impact, proving the last recommendations for the preparation of the final reporting, and evaluating the future actions. Similarly to the previous two meetings, the meeting was structured in eight slots one for each of the eight work packages. Each slot consisted in talks focused on the main results achieved by the work package throughout the project life. Indeed a poster session and the last social dinner were scheduled. The novelty of the 2016 meeting was the organisation of a stakeholders' meeting during the last day. This meeting was crucial to evaluate and discuss the impact of MED-SUV outcomes outside the project consortium, and in particular on the EU framework (EC, GEO, ect.), on the EU volcanology community, industrial sector, and society.