



Questionnaire



WP 9
**Decision-making and
unrest management**

Introduction

The present questionnaire is part of the activities of the project named "VUELCO – Volcanic Unrest in Europe and Latin America: phenomenology, eruption precursors, hazard forecast, and risk mitigation" financed by the European Commission.

The project aims at achieving a better understanding of volcanic processes leading to an unrest and to a possible eruption, and developing means and guidelines for better prevention practices and management of volcanic crises. (For further details please visit www.vuelco.net).

The purpose of this questionnaire is to collect information about decision-makers and their needs in case of volcanic unrest, with specific reference to the 6 project target volcanoes: Campi Flegrei (Italy), Colima (Mexico), Cotopaxi (Ecuador), Morne aux Diaboles (Dominica, West Indies), Soufrière Hills (Montserrat, West Indies), Teide (Tenerife, Canary Island, Spain).

This questionnaire is specifically addressed only to the authorities that have decision-making roles and responsibilities in case of volcanic unrest. For each one of the above mentioned countries, we asked to the partner-institutions involved in the project, to identify the organization that has decision-making responsibility in case of volcanic unrest and the possible key-person to answer to the questionnaire.

We would be very grateful if you could fill in the questionnaire, feeling free to add any information you consider useful and providing further suggestions.

Please note that the results of this questionnaire will be used only for the purposes of the project and will not be diffused or published in any way, without your previous expressed authorisation.

In case you think you are not the right person, or a part of the relevant organization, please help us, by sending back an email with the correct references.



SECTION 1 - General information about the decision-maker

Name:	
Role:	
Organization:	
Address:	
Country:	
Phone:	
Fax:	
Email:	

SECTION 2 - Structure organization

2.1 In your country, in case of volcanic unrest, who plays the role of decision-maker? (civil protection, ministry, mayor, ...)

2.2 How is the civil protection (or the decision-maker if different) organized? Has it a structure at national/regional/district/municipal level with a hierarchical organization?

2.3 How is the responsibility shared between central and local authorities in case of volcanic unrest?

2.4 What are the connections and links between decision-makers and scientific community? (agreement, contracts, etc.)

SECTION 3 - Volcanic risk management

REFERRING TO VOLCANO: Campi Flegrei Colima Cotopaxi Morne aux Diabes Soufrière Hills Teide

3.1 Have hazard probability maps been drawn?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Comments:		
3.2 Are there one or more predefined reference risk scenarios?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Comments:		
3.3 Does an emergency plan exist?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Comments:		
3.4 Are there predefined alert levels for volcanic hazard? How have they been defined?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
3.5 Who decides the variation of the alert level?		
3.6 Does an official advisory scientific committee exist? If yes, how is it designated and organized?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
3.7 Have prevention actions been carried out? (e.g.: land-use regulation, information campaigns, exercises, ...)	YES <input type="checkbox"/>	NO <input type="checkbox"/>
3.8 Have mitigation actions been carried out? (e.g.: escape route layout, barrier/channel construction, building structural retrofitting, non-structural elements resistance improvement, adoption of protection devices..)	YES <input type="checkbox"/>	NO <input type="checkbox"/>
3.9 How many people live in exposed areas and how many communities or villages are involved?		

3.10 Have you/your organization already managed volcanic unrests and emergencies in the past (including other volcanoes)? Where? When?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
3.11 What mitigation actions did you put into practice? (e.g. evacuation, adoption of protection devices, ...)		
3.12 Did you consider cost/benefits ratios before acting? And if so, how did you compute those ratios, and how did you include them in practice?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
3.13 Have you ever experienced unrest (or even ordered the evacuation) without following eruption (false alarms)? How did you manage them?	YES <input type="checkbox"/>	NO <input type="checkbox"/>

SECTION 4 – Communication strategies

4.1 How is communication between monitoring-scientific institutes (or expert committees) and decision-makers organized?
4.2 What communication strategies are usually adopted to inform the population at risk (meetings, mass-media, web)?
4.3 What and how many languages are used for civil protection information dissemination?
4.4 Who/which agency is responsible for communication to the population? Is there a unique responsible for diffusion of official information?
4.5 What is the volcanic risk perception by the population? How do you assess it?

SECTION 5 – Decision-makers needs

Scientific-technical information

In your experience, during a volcanic unrest, which of the following information is more useful to be provided with?
(Please rate from 1-least to 3-highest by ticking the related square)

	1	2	3
5.1 Kind of expected hazardous phenomena (earthquakes, pyroclastic flows, lahars, ash falls, lava flows, ...)			
5.2 Probability of occurrence of different possible hazardous phenomena			
5.3 Identification of geographic areas with different hazard levels			
5.4 Forewarning of hazardous phenomena			
5.5 Knowledge of expected evolution and duration of each hazardous phenomenon			
5.6 Knowledge of expected overall duration of hazardous phenomena			
5.7 Knowledge of probability of occurrence of the forecasted phenomena (e.g.: probability of 60% to have a plinian eruption within the next 3 weeks)			
5.8 Knowledge of associated uncertainty of the forecasted phenomena (e.g.: 60% ± 5% or 60% ± 40%)			
5.9 False alarms probability			
5.10 Failed or untimely alarms probability			
5.11 False alarms costs and associated risks (e.g.: loss of life...)			

During a volcanic unrest, If you were forced to choose between accuracy or timelines of each one of the previous information, what would you prefer? (please choose by ticking the related square)

	Accuracy	Timeliness
5.1 Kind of expected hazardous phenomena (earthquakes, pyroclastic flows, lahars, ash falls, lava flows...)		
5.2 Probability of occurrence of different possible hazardous phenomena		
5.3 Identification of geographic areas with different hazard levels		
5.4 Forewarning of hazardous phenomena		
5.5 Knowledge of expected evolution and duration of each hazardous phenomenon		
5.6 Knowledge of expected overall duration of hazardous phenomena		
5.7 Knowledge of probability of occurrence of the forecasted phenomena (e.g.: probability of 60% to have a plinian eruption within the next 3 weeks)		
5.8 Knowledge of associated uncertainty of the forecasted phenomena (e.g.: 60% ± 5% or 60% ± 40%)		
5.9 False alarms probability		
5.10 Failed or untimely alarms probability		
5.11 False alarms costs and associated risks (e.g.: loss of life...)		

