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'Understanding volcanoes and society: the key for risk mitigation'



Inclusive volcanic semaphore: early warning system

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The Volcano Early Alert System is a warning system for informing people and communities living under risk of volcanic eruptions about different levels of volcanic hazard. The inclusive volcanic semaphore is an apparatus for conveying information by means of visual, sonorous and tactile signals. An ash size particle light sensor ash meter will be connected to the instrumental panel. This research is the result of an evaluation of recent eruptions for helping disable people to minimize health and psychological impacts. This board includes a sound warning system, a braille-written panel, access ramps and a reading panel with recommendations and instructions. The semaphore provides accurate and updated information in advance, which is useful to take adequate and in-time actions in order to reduce the possibilities of damage or loss of life and materials. The population will be aware about the evacuation routes, established meeting points and the location of temporary shelters. For a rapid understanding it has been designed with large spots in order to be easily visible from distance and will be installed strategically positioned in a central populated area. Tourism center programs will include volcanic information with video and audio warning systems. The characteristics of the Inclusive Early Alert System and the instructions that it provides will be adapted to each volcano under observation, the eruptive history and the locality under risk. The degree of activity of the volcano must be evaluated by the Volcano Observatory and the Center of Research of Volcanic Ash, coordinated with the light colour in every city. The level of hazard will be updated according to the protocols provided by the Geological Survey of the country. The final decision of the evacuation will be taken by the local Emergency Commission. Therefore the four organisations must be articulated with the Volcanic Health Hazard System.