

Decision-making, hazard management and communication in a volcanic crisis: experiences from the eruption of Soufriere Hills Volcano, Montserrat, West Indies.

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The volcanic crisis at Soufriere Hills Volcano, Montserrat in the Eastern Caribbean has been ongoing for more than 20 years. The eruption began in July 1995, following at least 3 years of increased precursory seismicity. Over the following 15 years there have been five phases of extrusion of Andesitic lava, with some phases lasting several years separated by pauses of a similar length. Since February 2010 there has been no activity, but monitoring signals remained elevated indicating that future activity remains a distinct possibility.

The island of Montserrat now has a population of around 5000 people who live in the northwestern part of the island. The small size of the island has required a very specific type of volcanic hazard and risk management. Many of the population live in close proximity to valleys that drain the volcano and thus put them at direct threat from hazards such as Pyroclastic density currents and lahars. During activity the whole island is frequently affected by tephra fallout.

The volcano is monitored by the Montserrat Volcano Observatory (MVO), first established in 1995 at the onset of the eruption. The MVO advises the government of Montserrat and other authorities on the island, as well as providing information on the more regional ash hazard to aviation.

This talk will describe the volcanic crisis, the hazard management system and decision making processes that are used on the island and the challenges that are faced where a population chooses to live in very close proximity to volcanic activity.



Pyroclastic Density current moving down the NE flank of Soufriere Hills volcano, Montserrat on 25 June 1997 – 19 people were killed in this event.