



Cities on Volcanoes 9  
November 20-25, 2016  
Puerto Varas, Chile

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



## The volcanic hazard management and the public response in volcanic areas with variable population: the example of Stromboli volcano

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Keywords: volcanic hazard perception, communication, scientific community role, Stromboli

From classical antiquity to Present, Stromboli volcano has attracted travellers and multitudes of scientists, being considered a natural environment where the coexistence between natural phenomena and human beings is easy and hazard low. Mercalli (1907) identified mild explosions and continuous active degassing as the "ordinary" features of the strombolian activity at the craters. Starting from the mid-70s, the activity at Stromboli was described with increasing details and instrumental monitoring. So currently, scientists associate strombolian activity with continuous streaming of gas from the craters through diffuse 'passive' degassing and low-energy active degassing, during which discrete gas bursts can eject small amounts of magma. However, studies of the volcanic products from the last millennia and the eruptions observed in the last decades made the framework more complex in view of risk mitigation. The last serious threatening for Stromboli community occurred in the time span between December 2002 (Sc.Fuoco mass failure/tsunamis) and Spring 2003 (April 5 paroxysm). From that crisis, the further large collection of data have also led to the diffusion of some hazard maps and directions of Civil Defense on the territory, without this having produced a full understanding of the volcanic risk by people. Their capacity to react to changes of volcanic activity appears to be undermined by persistent under-aware of the volcano. The recent presentation of the new geological map of the Island (Lucchi et al., 2013) to a composite audience of islanders, tourists, hotel operators etc. highlighted that people feels vulnerable to the most hazardous event in terms of "media" (currently, the tsunamis) or some kind of past experience (direct or indirect), on which imagination works. The role of the scientific community (i.e. a direct interrelationships with local community) seems to be crucial more than that of local authorities in determining the attention and confidence from the public