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Understanding volcanoes and society: the key for risk mitigation

“Seismic analysis of volcano Misti Distal - 2011”

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This study is the analysis of seismicity volcano-tectonic (DVT) during the period from March to December 2011 around the Misti volcano. Were identified and located 72 seismic events. As a preliminary result 2 main seismogenic zones was determined: ZONE 1 between the Misti and Chachani volcanoes and ZONE 2 in the vicinity of the Caldera batholith. Seismic zone 1 events are characterized by spatially surface they are grouped with depths <15 km, with magnitudes between 1.4 and 2.1 Md. Meanwhile, events in zone 2 are presented much more dispersed, have more important depths up to 50 km, and have higher magnitudes reaching 2.7 Md. The preliminary solution obtained for the focal mechanism of earthquakes belonging to Zone 1 corresponds mostly to a transcurrent or oblique type with normal and reverse type components with the axes of tension (T) and pressure (P) oriented towards mainly NE mechanism - SW, NW - SE and in some slightly from N - S. Seismicity found in nearby Regarding the Misti and Chachani volcanoes can mention the fact that earthquakes clustered in an area close to an active volcano and surface area nature occur, may show signs of the presence of a zone of weakness. Zone 1 identified should, therefore, under surveillance, because in the event of a revival of any of these volcanoes, it is plausible that the areas of greatest current weakness (zone 1) are the first to show high seismicity dVT.