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



Communication Network of Vigias Implemented at Cotopaxi Volcano, Ecuador

Pedro Espín Bedón¹, Patricia Mothes¹, Marco Montesdeoca², Mario Ruiz¹, Alexandra Alvarado¹

¹ Instituto Geofísico-Escuela Politécnica Nacional

² Servicio Integrado de Seguridad-ECU-911, Ambato, Provincia de Tungurahua

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From the beginning of April 2015, Cotopaxi Volcano displayed an increase in seismicity, sulfur dioxide emission and superficial activity reported by the IGEPN- Quito. On Friday August 14, 2015 several phreatomagmatic explosions were recorded and since then the volcano has been behaving in an oscillatory fashion with mostly low level eruptive phases. People living in towns nearest to the volcano that could be affected by eruptive phenomena (ash, lahars) in the northern, southern and eastern sectors had many uncertainties about the potential consequences, especially if the volcano was to produce a big eruption such as in 1877 (VEI²4). Accentuating the level of uncertainty were factors of: hearsay, bad information, overdependence on poorly construed social media that instantly propagates, poor knowledge of volcanic eruptions, thus generating chaos and psychological insecurity. To improve the communication and knowledge about the volcanic activity and reduce vulnerability, IG and ECU-911 implemented in late September 2015 a communication network (Vigias). It consists of 55 people that live in areas that can be affected by debris flow (lahars). These people were given radios. The handies were delivered to community leaders, county mayors, parish presidents and Cotopaxi National Park staff. IGEPN and ECU-911 gave orientation talks about the communication equipment and volcanic phenomena. The radio communication system was a catalyst in fostering an effective and direct communication with each Vigia. The objective is to safeguard the lives of people by keeping them well informed but by also soliciting their input through contributing their visual and audible observations. Information is in two ways. Twice a day IGEPN staff reports to the Vigias about the monitoring information and the Vigias likewise report to the Centro TERRAS IGEPN-Quito and to the ECU-911 command center. It is important that the “Vigias” are community leaders who transmit the knowledge to their communities.