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



## **Argentina volcano monitoring observatory project**

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During the past 25 years the recurrence of emergencies caused by volcanic eruptions (e.g., Hudson 1991, Lascar 1993, Chaitén 2008, Planchón-Peteroa 2011, Puyehue-Cordón Caulle 2011, Copahue 2012, Calbuco 2015), which have emerged along the Andean Cordillera either in Argentine or Chilean territory (though which have influenced eastwards due to the predominance of winds), have caused multiple problems and material losses, provoking great concerns in the populations affected by these events and on national and provincial authorities in Argentina.

Given this and considering that along the Andes bordering Argentina and Chile there are approximately 90 volcanoes considered active (i.e., with historic and/or prehistoric eruptive record from 10,000 years ago), 38 of them in Argentina (Elissondo, M., in press), is necessary to develop and implement in Argentina the different methodologies used globally for early detection of changes in levels of volcanic activity in order to generate early warnings that allow mitigation of volcanic risk to which the country, its population and infrastructure is exposed.

Currently Argentina doesn't monitor any of its volcanoes; some of them shared along the border with Chile, so 7 are monitored by the Southern Andean Volcano Observatory (OVDAS) but only constrained on the Chilean side.

That is why the Argentine Geological and Mining Survey (SEGEMAR) is developing a project for the creation of the "Observatorio Argentino de Vigilancia Volcánica" (OAVV) as a specialized unit within SEGEMAR whose principal mission will be the "mitigation of volcanic risk to which the country, its infrastructure and population is exposed".

The project will initially start with the monitoring of 8 volcanoes, selected following different parameters using the NVEWS system (Ewert et al., 2005). The selected volcanoes for monitoring are: Lanin, Copahue, Tromen, Laguna del Maule, Planchón-Peteroa, Maipo, San José and Tupungatito.