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



The reconstruction of the geological eruptive activity at the Isluga Volcano as a tool for hazard map in the region.

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Isluga volcano is located in the border of Chile and Bolivia at 9°S and 84°W, a composite volcano and since 2010 it have been degassing mostly water vapor from its summit. We present a detail geological map base on new $^{40}\text{Ar}/^{39}\text{Ar}$ ages for the reference line of the hazard map of this volcano. Thanks to the geological mapping in the region we can develop a preliminar hazards map of this active volcano. We divide the geological history of this volcano on 4 main phases that represents mainly effusive events but there are signs of explosive events that can affect towns nearby. Population in the area is scarce; the nearest town is Enquelga at 8.64 km from the summit, with a population of 150 habitants. This town is the most affected by a plausible eruptive scenario. Blocky lava flows are the most common volcanic morphology of the Isluga Volcano and the longest flow is a 150 ka that reach 8 km from the summit. According to the deposit there have been volcanic material in the areas of the town, however there is still the discussion if this deposit are from the Isluga volcano. Therefore, we present a new and preliminar hazard map for the area base on this new geological data.