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## Using open source & low cost rain gauges to support debris flow real-time monitoring in Lima, Peru

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Debris flow, locally known as huaycos, impact the east part of the metropolitan city of Lima, capital of Peru. However, after many extreme events such as the one related to the 2017 “Coastal Niño” or the one in 1987, there is a lack of historical data and sufficiently accurate monitoring systems.

The fact that this area is densely populated presents obvious challenges, from social and physical perspectives, but also some opportunities. We present our experience using open source & low cost rain gauges on previously unmonitored microwatershed, as part of a broader watershed-level monitoring system enhancement by SENAMHI (National Meteorological and Hydrological Service). We also present our experience on linking monitoring systems, debris flow modelling and community based risk management towards developing operational EWS.