The importance of an effective communication strategy for the management of landslide monitoring data in urbanized areas

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The growth of population and the expansion of urbanized areas can create problems of interference with large slope instabilities. Usually, the risk related to the activation of large landslides can be managed to reduce the activity of the landslide through remedial works. If it is not possible, through complex monitoring network coupled with an early warning system and with a civil protection procedure. The use of monitoring network implies the use of technological systems that can acquire data and check if the recent evolution creates the condition for the activation of thresholds. Many studies and application have been developed to solve this technical challenge, but the exploitation and communication of monitoring results constitute an underestimated issue.

Monitoring data are often presented using not user-friendly representations that hamper the comprehension of results, in particular for non-expert users in landslide monitoring. This limit can be very critical, in particular during possible emergency related to the acceleration of the landslide that can prelude to a collapse of the unstable area. At this moment, monitoring data are one of the most important sources of information for decision makers who should be able to understand the obtained results.

Starting from the experience of the Mont La Saxe rockslide emergency management, we developed a strategy aimed to collect, organize and disseminate monitoring data. This strategy is based on the use of informatics tools able to manage: acquisition, processing, early warning, and infographic production in a near real-time website publication of the flux of information acquired by the monitoring network. Furthermore, we adopted also an integrated use of different bulletins for the dissemination of commented data and the organization of all the available information on the landslide.