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# A methodological approach to comparing pros and cons of delocalizing villages: socio-economic and technical issues

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On 7th March 2005, prolonged rainfalls combined with snowfalls activated a wide complex rock slide-earth flow that partly destroyed the village of Cavallerizzo at Cerzeto (Calabria, Southern Italy). Superposed tectonic units made of Palaeozoic metamorphic rocks, overlain by Miocene-Quaternary clastic terrains, crop out in the study area. The main scarp of the landslide developed by a recent normal fault, striking N-S along the western margin of the Crati graben and extended ca. 25 km. In its lower part, the phenomenon evolved in two main earth-flow bodies that extended along minor drainages and then merged along the S. Nicola torrent.

The sector affected by the instability actually belongs to a large-scale slope movement: the 2005 activation was in fact only a paroxysmal episode of a long history of slope deformations, noticed in the area since the XVIII century. Warning signs had been recorded for weeks before the collapse, and the threatened area had been put under monitoring by CNR-IRPI. When the movement accelerated, people had already been alerted and evacuated (329 out of 581 inhabitants of Cerzeto were sheltered in nearby villages), thus neither victims nor injured were recorded. As a whole, 124 buildings were severely damaged or destroyed, the main road was interrupted.

Immediately after the 7th March 2005 event, the national Department for Civil Protection decided to evaluate the feasibility of delocalizing Cavallerizzo to another site. At this purpose, CNR-IRPI was asked to analysing the "geological suitability" of 3 different sites (Pianette, Amatine, and Colombra), pre-selected by the same Municipality of Cerzeto in accordance to the Civil Protection; the results of the study were completed in early Summer 2005.

Between October 2007 and December 2011, a new settlement was realized by the Italian Government, and the houses were delivered to people once living at Cavallerizzo. In the last years, the socio-economic effects of the delocalization of Cavallerizzo have been analysed within the frame of a PhD thesis by one of the authors.

The present study focuses on the Cavallerizzo case study to discuss a methodological approach useful to comparing pros and cons of delocalizing villages, aiming at properly considering socio-economic effects in addition to technical issues.