



## **Economic risk assessment in case of landslide. The case of an Italian Alpine valley.**

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Landslides are the most dangerous phenomena in mountain regions. The Italian Research Council estimates that every year direct damage due to landslides amounts approximately to 1.5 billion euros. In the context of the Fifth RTD Framework Programme of the European Commission, a project has seen the participation of Università degli Studi di Milano, in order to develop a model to assess the economic consequences of landslides. The research aimed to assess landslide damage in the area of Corvara (Dolomites, Italian Alps). Corvara holds a very important role in the economy of this area, due to its natural attractiveness and its role as part of an important winter sports tourist district. The analysis started with the assessment of socio-economic dynamics in the area. The results describe the social and economic background in which the landslide phenomenon is studied. In this way it is possible to recognize the most important drivers for the economic development of the area and the weaknesses of the system itself. The socio-economic information is spatially georeferenced using GIS software. Overlaying the geomorphologic data with the socio-economic ones, it is possible to underline the most sensitive elements that characterize the area. On the basis of the vulnerability analysis, which gave results also on the “physical potential effects”, an estimation of potential damage was made. According to economic practice, the “cause-effects” quantitative correlation was used to assess direct and indirect damage. This analysis has shown very interesting results: first of all, it has proved that indirect damage plays an important role in the overall assessment of damage. Indirect damage shows its importance in the long term and acts on a wider area. In the longer term indirect effects could also weigh on social development and, without specific intervention on the economic structure, they could compromise the economic development itself.