Geophysical Research Abstracts
Vol. 20, EGU2018-2358, 2018
EGU General Assembly 2018

The new landslide and rock glacier inventory map of Canton Ticino

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The landslide inventory map of Canton Ticino was recently upgraded thanks to 2D and 3D digital photo-interpretation. The state of activity of the mapped events was updated using InSAR and ground base radar data, as well as geodetic monitoring. This mapping allowed the inventory of 2035 landslides (covering a surface of 184.4 km2), 4376 shallow landslides (covering a surface of 133.7 km2) and 188 Deep Seated Gravitational Slope Deformations (DSGSD). Landslides are composed by 1494 slides, 86 flows, 390 falls (comprised between 100 and 1'000'000 m3) and 65 rock avalanches (> 1'000'000 m3). 334 landslides were considered as active (238 slides, 17 flows and 79 falls). Shallow landslides includes: erosion areas; talus slopes, scree slopes, coarse-scree slopes and rockfall deposits (< 100 m3); debris flow deposits; mixed cones (both rockfall and debris flow deposits).
Based on this mapping, the regional rock glacier inventory was also updated. Actually, 279 rock glaciers were recognised in the Ticino Alps, comprising 48 ice-cemented active rock glaciers, 17 ice-cored active rock glaciers, 51 ice-cemented inactive rock glaciers, 3 ice-cored inactive rock glaciers, 157 relict rock glaciers and 3 push-moraines.