Geophysical Research Abstracts
Vol. 15, EGU2013-11081, 2013
EGU General Assembly 2013


# Cultural Heritage exposed to landslide and flood risk in Italy

Daniele Spizzichino (1), Carlo Cacace (2), Carla Iadanza (1), and Alessandro Trigila (1)

(1) ISPRA, Italian National Institute for Environmental Protection and Research, Via Vitaliano Brancati 48, 00144 Rome (daniele.spizzichino@isprambiente.it), (2) ISCR - Central Institute for the Conservation and Restoration, Via di San Michele 23, 00153 Rome, Italy

Italy is the country that owns most of the world cultural heritage as it's clear from the list of sites of inestimable value to humanity, prepared by UNESCO under the Convention concerning the protection of the world cultural and natural heritage ratified in 1972. The Italian territory is also particularly prone to natural hazards such as landslides, floods, earthquakes, volcanic eruptions, subsidence and coastal erosion which undermine the protection and preservation of cultural heritage. Aim of the present work is to provide an estimate of architectural, monumental and archaeological heritage exposed to landslide and flood risk at national scale. The input data are: the Italian Cultural Heritage database (Carta del Rischio del patrimonio culturale) realized by ISCR (Central Institute for the Conservation and Restoration); the Italian Landslide Inventory (Progetto IFFI) developed by ISPRA (Italian National Institute for Environmental Protection and Research) and the Regions and Self-Governing Provinces of Italy and the flood hazard zones defined by the Italian River Basin Authorities. Italian landslide inventory contains more than 486,000 landslides affecting an area of about 20,800 km2, equal to 6.9% of Italian territory. In order to estimate the number and type of cultural heritage at risk some GIS processing have been carried out, overlapping information from the above mentioned databases. The analysis provided the following results: Cultural Heritage exposed to landslide risk were estimated to 5.511 (6.6%) while the ones exposed to flood risk results 9.859 (11.7%). Two case studies concerning landslide phenomena affecting important Italian municipalities and the flood risk of historical centre of Rome, have been also analyzed. These results could be used to identify priorities and plan field surveys, detailed studies and monitoring systems, allowing job scheduling of cultural heritage maintenance. This need becomes more and more a necessity taking into account the importance of the Italian cultural heritage and the lack of funds available for its protection and conservation.