Geophysical Research Abstracts
Vol. 20, EGU2018-18388, 2018
EGU General Assembly 2018

Land use changes investigation using different data sources: an application in the Ligurian agricultural terraced landscape (north-western Italy)

Giacomo Pepe (1), Pierluigi Brandolini (1), Andrea Cevasco (1), Luigi Mucerino (1), Marco Firpo (1), and Patrizio Scarpellini (2)

(1) Department of Earth, Environmental and Life Sciences, University of Genoa, Italy (giacomo.pepe@unige.it), (2) Cinque Terre National Park, Via Discovolo snc, c/o Stazione Manarola, Riomaggiore, La Spezia, Italy

Terraced slopes are one of the most relevant morphological features of the Mediterranean landscapes. Agricultural terraces are widespread in Liguria (north-western Italy) where, starting from the 12th century, wide portions of natural landscape were strongly modified to develop agricultural activities. By means of deforestation and reworking of soil covers, natural slopes were shaped by terraces retained by thousands of kilometres of dry stone walls. Because of the significant demographic, social and economic changes occurred during the last century, a significant percentage of traditional agricultural terraced slopes has been abandoned. Farmer abandonment and land mismanagement practices contributed to hillslope degradation, leading to the increase of risk conditions. Recent researches demonstrated that terraced slopes abandonment played a crucial role in increasing the magnitude of hydrological and geomorphological processes.
In this framework, we present the experiences coming from the comparison of multitemporal data sources (cadastral information and high-resolution aerial photos) to evaluate the land use changes on terraced areas within a small costal basin in the Cinque Terre National Park (eastern Liguria). It is worth noting cadastral data allowed to recognize at very detailed scale the former terraces extent, also where they have been covered by dense vegetation or disrupted by geomorphological processes.
The outcomings of this study provide a fundamental contribute to define effective strategies for land management and planning.