



Geospatial Data management and sharing to improve the assessment of agricultural terraced landscape

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The interaction between natural resources and human needs gave the birth to a series of cultural and traditional landscapes. Among these there are agricultural terraced landscapes. Nowadays, because of a general trend of agricultural practices abandonment, particularly in those area characterised by a not easy mechanisation, the protection and characterisation of agricultural terraced landscape is an important issue in local, national and international policies. An important effort in characterisation is given by remote sensing techniques linked to GIS software use. In this research, Land Use/Land Cover (LU/LC) maps were created for 1955, 1976, 1989, 1998, 2008, 2012 and 2014 via digitalisation in GIS environment of a series of base maps obtained by aerial photos and satellite images. The chosen study area, “Costa Viola”, is a narrow coastal strip placed in the Tyrrhenian Province of Reggio Calabria (South of Italy) and characterised by terraced agricultural areas both abandoned and still in use. Thanks to LU/LC maps, the total surface occupied by each LU/LC digitalised has been calculated, given a sign of transformation occurred to terraced landscape. Active terraces decrease from 813.25 ha in 1955 to 118.79 ha in 2014, losing the 85.4% of their surfaces. To protect and manage these landscape is necessary to share results of different research conducted. Thanks to WWW (World Wide Web) diffusion, researchers can share their results, given into the hands of stakeholders and decision-makers an important tool to define management strategies, improving participatory processes. To share the result of this research a Free Open Source Software for Geospatial (FOSS4G) Spatial Data Infrastructure (SDI) has been implemented, linked to a WebGIS client that allow the Spatial Database querying, the visualisation of different obtained base maps, the visualisation of different digitalised LU/LC maps and the comparing of changes thanks to dynamic interactive graphs. Moreover, to allow a transnational access to the results, a data harmonization procedure has been conducted using INSPIRE (Infrastructure for Spatial Information in Europe) LC specifications.