



Land cover change dynamics in the Southeast of Spain. The abandonment of agricultural areas

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Land cover change (LCC) is a complex process continuously affected by severe alterations that can produce numerous consequences for terrestrial and aquatic environments. Climate and several human activities are capable of increasing the LCC and, for that reason, the understanding of recent LCC is fundamental for decision makers to identify appropriate land use policies, which might derive in better urban management programmes. Land cover patterns in the southeast of Spain (Almería, Murcia and Alicante provinces) were determined from CORINE Land Cover (CLC) database and a geographic information system (GIS), comparing digital land cover maps of 1990, 2000, 2006 and 2012. In addition, the most significant LCC were checked using contemporaneous aerial images. Results showed that the agricultural and forestry land covers are the most important in the study area. In 1990, they covered 97.4% of the studied territory, followed by the artificial surfaces (2%). From 2000 to 2006 land cover change was lower than 2%. Nevertheless, the dynamic LCC increased considerably from 2006 to 2012 (about 13.6%). During this period, agricultural areas decreased in 790 km² and forest areas and artificial surfaces increased in 559 km² and 255 km² respectively. 44 different classes compose level 3 of land cover classes in CLC. Their analysis evidences an important increase of discontinuous urban, industrial and commercial zones, pastures, and coniferous forest from 1990 to 2012. In contrast, crops and forest areas with low vegetation were mostly reduced, which reflects the agronomic regime (set-aside) introduced by European Union in 1988 with the aim of reducing and controlling the price of agricultural products. However, the LCC dynamics is not continuous between 1990 and 2012. The abandonment of agricultural areas, observed from 2000 is accentuated in the last decade. The most significant changes were observed between 2006 and 2012. Within this period, results confirm the conversion of crops in pasture, urban and industrial areas. Unlike the important urban growth, urban land cover only accounts for less than 6% out of the total surface. From conclusions, it's worthy to be highlighted that land cover changes are directly influenced by economic and political guidelines and does not follow a natural continuous trend along the studied period.