

We provide the first known quantitative analysis of land cover change for the whole of the Catalan Countries and for some especially well-studied areas in particular (Catalonia, and the province and metropolitan area of Barcelona), considering various periods of time between 1956 and 2015. The study was performed on the basis of the main cartographic sources available for this territory, including the CORINE land cover map (1990-2012), the CREAM land cover maps (1956-2015) and the land use and cover maps of CREAM and the ICGC (1987-2012). Using these maps, we have studied the changes in composition, structure and ecological functioning of the landscape, and these changes' potential effects on biodiversity and the provision of the so-called ecosystem services. The observed changes coincide quite closely with those of the rest of Mediterranean Europe and have had contrasting effects on the structure and functioning of highland and lowland landscapes. In lowlands, the predominance of urbanization and agricultural intensification have led to diversification and fragmentation of landscapes and, at the same time, a loss of ecological connectivity. In the mountain ranges, however, connectivity has increased due to a widespread forest recovery at the expense of a significant decrease in croplands. The effects on biodiversity and the provision of ecosystem services are certainly complex, although there is a greater impact on open habitats and those located in highly transformed areas which are now metropolitan and which are strongly conditioned by simplification and biotic homogenization processes.