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SPATIO-TEMPORAL ANALYSIS OF LAND USE AND LAND COVER CHANGES IN BOĞAÇAYI WATERSHED IN A TOURISTIC REGION IN TURKEY

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Abstract

It is increasingly acknowledged that land use and land cover change has become a key subject in the Mediterranean coastal region that needs to be addressed more regionally in the context of severe effects on natural ecosystems. The objective of this study was to analyze the land use/land cover changes and the growth of artificial surfaces in relation to the population growth in Boğaçayı Watershed of Antalya in Turkey, which has been declared as a tourism development region, between 1990 and 2018. In this respect, in this study, supported by the long-time series of land use/land cover data of 28 years, the land-use transition matrix was used to derive detailed information on the spatial and temporal variation of the land use/land cover change. Results showed a 71.89% increase in the artificial surface areas, 88.24% decrease in the open spaces, 52.35% decrease in the bare ground, and 18.56% decrease in the sand-covered areas. The artificial surfaces expanded mostly into agricultural land, vegetation-covered areas, and sand-covered areas, respectively. Results also showed that there was a positive correlation between artificial surface expansion and population increase. Therefore, it is crucial to determine the major driving forces behind the land use/land cover changes in the coastal Mediterranean region. Thus, plans can be made in a more sustainable way considering both the conservation of natural ecosystems and economic developments.

Key words: coastal urbanization, land use/land cover changes, Mediterranean, population

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