

Factors affecting changes in forest areas in Turkey

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Abstract: According to World Bank data, forest areas covering 31.8% of Earth's surface in 1990 have decreased to 30.8% by 2015 (WB, 2017). Many adverse factors, such as, politically-motivated legislative regulations, illegal use, opening of forest areas for agriculture, and climate change, play a role in the reduction of forest areas. Yet, as a result of rapid population growth, humanity is becoming more and more dependent on forests. Forests play an important role in the survival of all living creatures on Earth. Decrease in forests causes floods, storms, severe weather conditions, extreme drought, etc. and causes people to suffer greater damages. Biodiversity is adversely affected by deforestation and this also affects human life. In order to eliminate the causes of deforestation in the world and establish new forest areas, following the United Nations Environment and Development Conference in 1992, many mechanisms have been established at national and international level and various processes have been started. Although there is an overall decline in forest areas in the world, Turkey is one of the countries that saw increases in its forest areas. In Turkey, the forest area ratio of 27.2% in 2006 has increased to 28.7% by 2015 (GDF, 2017). In this study, the differences in the ratios of increases or decreases in forest areas throughout Turkey and the socioeconomic indicators that were influential on those changes have been examined. In order to be able to carry out an accurate comparison and evaluation, province level was chosen as the area unit. Variables were created by utilizing the official statistics from the Ministry of Development, General Directorate of Forestry, and Turkish Statistical Institute, covering the years 2006 to 2015. The data for variables were collected for all 81 provinces in Turkey. These variables were then evaluated and interpreted by statistical analysis. The population of the residential area and the expectations of its population from the forests play an important role in the direction of the changes with regards to the quality and quantity of the forests. The results of the correlation analysis showed that there is a significant (-0,273*) negative correlation at 95% confidence level between the change in forest area (%) and the change in provincial population (%). Accordingly, forest areas have been observed to be decreasing in the provinces where the population is increasing. The percentage of forest areas of 61 provinces in Turkey have increased at various levels between 2006 and 2015. While the forest areas of 19 provinces have been decreasing, there has been no change in Hakkari province. Bayburt province has been the province that increased its forest areas the most. 14.163 ha of forest area covering 3.9% of the province in 2006 increased by 15.630 hectares to 8.3% by 2015. Adıyaman has been the province where the forest areas have decreased the most during the same period. 185.145 ha of forest area covering 25.1% of the province in 2006 decreased by 26.564 hectares to 21.5% by 2015.

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