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The Importance of Forest Lands in Terms of Bioclimatic Comfort: Sample of Aras Basin

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ABSTRACT Humanity has been affected by some atmospheric phenomena such as temperature, precipitation, wind, pressure and humidity. The optimum level of atmospheric events (bioclimatic comfort) enables people to carry out various activities. Extreme climate characteristics have affected the daily life activities, work, production, recreation and leisure activities of people. Sustainable healthy and qualified life depends on suitable climate conditions. Bioclimatic comfort consists of temperatures between 21.0 °C to 27.5 °C, the relative humidity value between 30% and 65% and the wind speed up to 5.0 m/sec in an open space. The study area was a region of 22 7951 km^2, which includes Aras Basin, one of the important hydrological basins of Turkey, and its environment. In this study, it was aimed to investigate interactions between the forest structure by determining the most suitable areas with regard to bioclimatic comfort according to climate data obtained from 13 meteorological stations in the Aras basin and its vicinity. Using the point data base, ArcGIS 9.3 software, climatic maps (average temperature, relative humidity and wind speed maps) were constituted by digitizing the national coordinate system. According to research results, the most suitable areas have been determined as totally 17 091 km^2 in terms of bioclimatic comfort in the Aras River Basin. This study has shown that forest lands have affected bioclimatic comfort data positively in parallel results determined on many studies proving a positive interaction between bioclimatic comfort and forest land. Most of the suitable areas with regard to bioclimatic comfort have rich forest potential.