



General Ecological Characteristics Based on GIS Methods in Poyrazlar Lake, Turkey

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In this research, general ecological features in Poyrazlar lake is investigated. The study area is located in the east part of Marmara region and north-western part of the Adapazari plain (north-western part of Turkey) between the coordinates of 40°48'-40°52' N and 30°23'-30°30' E.

Research area is within phytogeographical region of Euro-Siberian that is among flora and phytogeographical region of Turkey. The main element of vegetation consists Humid-Mild Deciduous forests (especially *Quercus* spp.) and hydrophyte plants (such as reeds and *Nymphaea alba* L.).

Poyrazlar lake, that's water is fresh, is one of the important wetland areas in the region with its ecological characteristics. Especially the research area is haunted by various migratory birds and it is an important recreation area.

The objective of this study is to analyze particularly the formation of Poyrazlar lake, ecological features of this area and negative influence of surrounding human activities in the area. For this purpose topography, geology, soil maps, forest arrangement plan, Spot 5 (2010 period) satellite image for current land use map and field observations data are used. These images are analyzed by utilizing data image processing techniques in ERDAS Imagine[®] 10.0 and ArcGIS[®] 10.0 software.

Keywords: Ecology; Ecological Features; GIS; Alluvial Dam Lake; Poyrazlar Lake