## **Ancient Settlements in the Lower Kızılırmak Valley**

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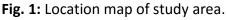
## **Extended** abstracts

The study area is the Lower Kızılırmak Valley (41° 25′ - 41° 45′ N and 35° 38′ - 36° 09′ E) covering the delta, lower plateaus, mountainous steep slopes, and narrow deep tributary valleys of the Kızılırmak River (Fig. 1). Archaeological surveys in the region determined 16 Bronze Age settlements, 10 Roman period settlements, and 18 tumuli (Alkım 1972, 1973, 1974, 1975; Alkım et al. 1988, Kızıltan 1992) (Fig. 2). In this study, answers to the following two questions were investigated by the geographic approach. Why did people choose to settle in this region? How did they live in this area? Geographic Information System (GIS) methodology was used for analysis. Topographic, hydrographic, soil, and geological databases were created using Mapinfo software. Surface and spatial analyses were carried out using the same software.

The topographic database was used to determine the main geomorphological units and to carry out slope analysis. The Quaternary delta plain (Bafra Coastal Plain), Pliocene old delta levels, southern plateau surfaces and Lower Kızılırmak Gorge are the main geomorphological units in the study area (Turoğlu 2010). Slope analysis was conducted in four categories: 0-7, 7-11, 11-18 and 18+ degrees, which are the meaningful slope classes in terms of agriculture and settlement (Fig. 2) (Selassie 2015). The soil map was produced using the database and classified into five soil classes, as Brown forest soils, Brown podzolic soils, Hydromorphic soils, Collivial soils, Alluvial soils, mapped (Fig. 3).

As a result of analysis, the following assessments were obtained. Geographical conditions of the Lower Kızılırmak Valley played a decisive role in the choice of settlement in ancient times. Water (for freshwater sources), Geomorphology (for shape and elevation of surface features of the land), Climate (for temperature, precipitation, wind, humidity), Vegetation (Plant species and population density of plants) were all important geographical parameters for the selection of sites for settlement during the Bronze Age and Iron Age in the study area. Also, the Kızılırmak River played an important role in early settlements/civilizations due to its providing freshwater sources for drinking water, freshwater hunting and gathering, freshwater sources for agricultural irrigation, natural waterways and transportation, and protection against enemies. In addition, the Lower Kızılırmak River basins were also important in supplying the needs of early settlements/civilizations in many ways, including Agricultural areas (Delta, river terraces, alluvial valley floor, alluvial fans), Land gathering and hunting (high levels of plant species diversity, wildlife species and population richness), Raw materials (Forests for trees, Clay for pottery, Mines for metals), and Security of the city/settlement (High and steep slopes, Rough terrain, Deep and narrow valley systems, Ease of defence). The above evaluation can be regarded as the reasons for settlements gathering in the Lower Kızılırmak Valley during the Bronze Age and Iron Age.







**Fig. 2:** Location of Bronze and Iron Age settlements and tumuli in region.

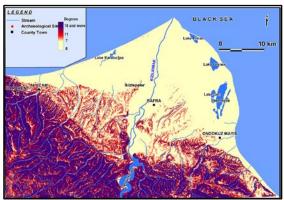


Fig. 3: Slope map of study area.

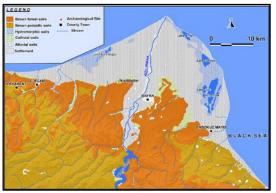


Fig. 4: Soil map of region.

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