



## URBAN CONSTRUCTION IN THE ARAL SEA REGION DURING ANTIQUITY

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### ABSTRACT

*The Aral Sea region occupies an important place in the ancient history of Central Asia. Located at the intersection of major cultural and economic routes, the region developed distinctive traditions of settlement, urban construction, irrigation, fortification, and architectural planning. During antiquity, communities living around the ancient Aral Sea and the lower Amu Darya developed various forms of permanent settlements, fortified towns, administrative centers, and agricultural communities. Archaeological sites such as Akcha Khan Kala, Toprak-Kala, Koykrylgan-Kala, and other fortified settlements provide important evidence concerning the organization of urban space and the development of architectural technologies in ancient Khorezm. The construction of cities in the region was closely connected with irrigation agriculture, environmental conditions, political organization, defense, and trade. Fortification walls, monumental buildings, residential quarters, religious structures, and hydraulic systems demonstrate the high level of engineering knowledge possessed by ancient populations. This article examines the main characteristics of urban construction in the Aral Sea region during antiquity, focusing particularly on the architectural organization of ancient Khorezm and the relationship between urban development and the natural environment. The study also considers the historical significance of archaeological monuments for understanding the cultural development of the region.*



## **Introduction**

The Aral Sea region has long been recognized as one of the important cultural and historical areas of Central Asia. The territory surrounding the ancient Aral Sea included the lower Amu Darya basin, Khorezm, the Ustyurt Plateau, and adjacent regions. Although modern environmental conditions differ considerably from those of antiquity, archaeological evidence demonstrates that ancient communities developed complex systems of settlement and agriculture in this area.

Urbanization in the Aral Sea region was closely associated with the development of irrigation agriculture. The Amu Darya provided water for agricultural production and supported the growth of permanent settlements. As agricultural communities became more economically and politically organized, larger settlements emerged. Some of them gradually developed into fortified towns and administrative or religious centers.

Ancient Khorezm represents one of the most significant examples of early urban development in the region. Archaeological investigations have revealed numerous fortified settlements, palaces, temples, residential areas, and irrigation structures. These monuments demonstrate that urban construction was not an isolated architectural phenomenon but part of a broader social, economic, and political system.

The purpose of this article is to examine the main characteristics of city construction in the Aral Sea region during antiquity and to identify the factors that influenced the formation and development of ancient urban centers.

## **1. Historical and Geographical Background**

The geographical position of the Aral Sea region had a major influence on the development of ancient settlements. The lower Amu Darya created fertile agricultural zones surrounded by extensive deserts and semi-desert landscapes. The contrast between irrigated agricultural lands and arid territories encouraged communities to concentrate around water sources and river channels.

The Amu Darya was therefore not only a natural resource but also an important factor in the formation of settlement networks. Irrigation canals allowed people to cultivate cereals, fruits, vegetables, and other agricultural products. Agricultural surplus contributed to population growth and supported the development of specialized crafts, trade, administration, and military institutions.

Ancient Khorezm became one of the principal cultural centers of the lower Amu Darya. Archaeological evidence indicates that the region experienced significant political and architectural development during the first millennium BCE and the first centuries CE. Fortified settlements were constructed in strategic locations, frequently near irrigation systems or important routes. The natural environment also influenced architectural techniques. Builders had to adapt to the availability of local materials and the climatic conditions of the region. Mud



brick became one of the principal construction materials. Thick walls, enclosed courtyards, towers, and defensive corridors were widely used in fortified settlements.

## **2. Development of Fortified Urban Settlements**

One of the most characteristic features of ancient urban construction in the Aral Sea region was the extensive use of fortifications. Ancient settlements were frequently surrounded by massive defensive walls. Such structures protected inhabitants from military attacks and also emphasized the political and administrative importance of the settlement.

The fortifications of ancient Khorezm often included towers, gates, corridors, and complex defensive systems. The use of towers allowed defenders to observe the surrounding territory and protect vulnerable sections of the walls. Entrances were carefully planned and could include narrow passages or additional defensive structures. The archaeological site of Toprak-Kala provides important evidence of this architectural tradition. Toprak-Kala developed as a major fortified center in ancient Khorezm. Its monumental architecture included a large palace complex, administrative buildings, residential areas, and defensive structures. The scale of the construction demonstrates the existence of centralized political authority and organized labor. The palace complex at Toprak-Kala contained numerous rooms and halls and was decorated with architectural sculptures and wall paintings. The monument illustrates how political power influenced the organization of urban space.

## **Conclusion**

Large public and administrative structures occupied a significant position within the fortified settlement. Another important site is Akcha Khan Kala. Archaeological research at this site has revealed monumental architectural remains and evidence of a complex settlement structure. The site demonstrates that architectural development in ancient Khorezm was characterized by large-scale construction projects and sophisticated planning.

Koykrylgan-Kala represents another significant monument in the archaeological landscape of ancient Khorezm. Its circular architectural plan is particularly notable. The structure was surrounded by defensive walls and included an inner monumental building. Archaeological interpretations associate the site with religious, ceremonial, and possibly administrative functions.

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