

THE SOCIAL SIGNIFICANCE OF WELLS, SARDOBAS, AND WATER STRUCTURES IN THE KHIVA KHANATE

Mutallibjonov Boburmirzo

University of Business and Science

Faculty of Social and Humanitarian Sciences,

Department of History, 4nd year student

***Abstract:** In this article, the social significance of wells, sardobas, and water structures in the Khiva Khanate is examined against the backdrop of chronic water scarcity in the arid Khorezm oasis. Using a qualitative historical methodology based on archival records, waqf documents, and comparative sources, the study moves beyond prior engineering- and religion-focused approaches. Findings show that sardobas, often built within madrasah and mosque courtyards, merged water supply with education and religious life, while founding legends like the Kheyvak well shaped civic identity. The article concludes that these structures functioned as multidimensional social institutions, combining charity, trade, and political control.*

***Keywords:** Khiva Khanate, sardoba, wells, water infrastructure, waqf, Khorezm*

СОЦИАЛЬНОЕ ЗНАЧЕНИЕ КОЛОДЦЕВ, САРДОБ И ВОДОПРОВОДНЫХ СООРУЖЕНИЙ В ХИВСКОМ ХАНСТВЕ

Муталлибёнов Бобурмирза

Университет бизнеса и науки,

факультет социальных и гуманитарных наук,

кафедра истории студент 4 курса

***Аннотация:** В данной статье рассматривается социальное значение колодцев, сардоб и водных сооружений в Хивском ханстве на фоне хронической нехватки воды в засушливом оазисе Хорезм. Используя качественную историческую методологию, основанную на архивных документах, документах вакфа и сравнительных источниках, исследование выходит за рамки прежних подходов, ориентированных на инженерные и религиозные аспекты. Результаты показывают, что сардобы, часто строившиеся во дворах медресе и мечетей, объединяли водоснабжение с образованием и религиозной жизнью, а такие легенды, как история Хейвакского колодца, формировали гражданскую идентичность. В заключение статьи делается вывод о том, что эти сооружения функционировали как многомерные социальные институты, сочетающие благотворительность, торговлю и политический контроль.*

***Ключевые слова:** Хивское ханство, сардоба, колодцы, водная инфраструктура, вакф, Хорезм*

Introduction. Water has always been the foundation of life and civilization in the arid regions of Central Asia, and nowhere is this more evident than in the historical Khiva Khanate, situated within the Khorezm oasis along the lower reaches of the Amu Darya. Surrounded by the vast Kyzylkum and Karakum deserts, the khanate's inhabitants faced constant challenges in securing reliable access to fresh water for drinking, irrigation, and daily household needs. In response to these harsh natural conditions, local rulers, craftsmen, and communities developed a sophisticated network of water infrastructure, including wells (quduqlar), sardobas (domed cisterns built along caravan routes), canals, and reservoirs. These structures were not merely technical or engineering achievements; they carried profound social and cultural significance for the population of the khanate.

Literature Review; The study of water infrastructure in Central Asia, particularly within the Khiva Khanate, has attracted the attention of historians, archaeologists, and ethnographers over the past century. Early Russian orientalists documented the general layout of Khorezm's irrigation canals and settlements, noting

the dependence of urban life on artificial water sources [1, p. 3]. Soviet-era archaeological expeditions later expanded this research, conducting systematic surveys of ancient and medieval hydraulic structures across the Khorezm oasis, including wells and reservoirs associated with trade routes [2, p. 15].

Uzbek scholars in the post-independence period have paid particular attention to the socio-cultural dimensions of these structures, arguing that sardobas functioned not only as water reservoirs but also as centers of charitable and religious activity tied to waqf institutions [3, p. 27]. Architectural historians have further examined the construction techniques of domed sardobas, highlighting their adaptation to desert climatic conditions and their role in sustaining caravan trade [4, p. 42].

Methodology; This study employs a qualitative historical research approach, combining archival analysis, comparative literature review, and descriptive-analytical methods to examine the social significance of wells, sardobas, and water structures in the Khiva Khanate. Primary sources include historical chronicles, waqf documents, and travelers' accounts describing water infrastructure along Khorezm's trade routes [1, p. 8]. Secondary sources comprise archaeological survey reports and academic studies on Central Asian irrigation systems, which provide contextual and comparative data [2, p. 21].

Results. The analysis reveals that wells and sardobas in the Khiva Khanate functioned as more than simple water-storage facilities; they were embedded in the region's urban and social fabric. The legendary well of Kheyvak, still preserved in Ichan-Kala, is traditionally regarded as the founding point of the city itself, illustrating how a single water source could become central to communal identity and civic memory [6, p. 1]. Domed cisterns known locally as tegizamin or sardoba were commonly built within courtyards of madrasahs and mosques, combining religious, educational, and hydraulic functions in a single complex [7, p. 6]. Their domed structure served a practical purpose — limiting evaporation and preventing contamination — while also acting as a visible marker guiding travelers toward available water [7, p. 7].

Construction materials were carefully selected for durability in the arid climate; clay sourced from the lower Amu Darya region was prized for its moisture resistance, reflecting accumulated local engineering knowledge passed down through generations of craftsmen [7, p. 9]. Beyond Khiva itself, similar sardoba structures were built along caravan routes connecting other Central Asian settlements, such as Bukhara and Karshi, indicating that this water infrastructure formed part of a broader regional network supporting trade and pilgrimage [7, p. 12].

Discussion. The findings presented above suggest that water infrastructure in the Khiva Khanate cannot be understood purely as a technical response to environmental scarcity. Rather, wells and sardobas functioned as multidimensional institutions that intertwined engineering, religion, commerce, and political authority. The association of the city's founding legend with the well of Kheyvak indicates that water sources held symbolic and even sacred status, reinforcing earlier observations in the literature review regarding the charitable and religious dimensions of waqf-endowed structures [3, p. 27; 6, p. 1].

Conclusion. This study has shown that wells, sardobas, and other water structures in the Khiva Khanate carried significance far beyond their technical function of storing and distributing water. In a region shaped by desert conditions and an unpredictable river course, access to water became a decisive factor in shaping settlement patterns, trade routes, and even political authority, rather than serving as a mere necessity for survival.

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