

The History of Architectural Development and Gradual Evolution of Sardobas in Central Asia

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Abstract: This article provides information on the historical architectural development of sardobas in Central Asia, their functional purposes, and architectural features. It also discusses the architectural and structural complexity of these hydro-technical constructions, as well as the stages of their artistic and aesthetic evolution.

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The earliest emergence of sardobas in Central Asia was previously believed to date back to the 9th century. However, M.E. Masson proposed that they had existed in Central Asia even before the Islamic period. At the end of the 20th century, archaeologists discovered unique remains of a sardoba dating back to the 1st century BCE in the ancient town of Dilbarjin, near the city of Balkh in northern Afghanistan. This sardoba significantly differs from medieval sardobas in terms of its layout, structure, and water collection method. It consisted of a square-shaped pool, a domed hall covering it, and a surrounding corridor (raxrov). The sardoba pool was mainly constructed in the style of a well and was supplied with underground water (Figure 1).

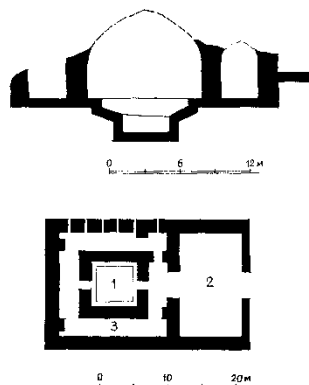


Figure 1. Sardoba of the ancient town of Dilberjin. 1st century BCE, Northern Afghanistan.

From the early 9th century to the early 13th century, the socio-economic conditions and the development of science in Central Asia led to the flourishing of trade and craftsmanship. As a result, construction along trade caravan routes, including the building of sardobas, significantly increased.

Historical sources from this period indicate that many sardobas were built in the city of Balkh and the Balkh region, in the oases of Merv and Bukhara, as well as in the southern areas of Central Asia with hot and arid climates. During the medieval period, similar water reservoirs—called ob-ombor in Iran and Iraq, and avdon in Azerbaijan—were also constructed in neighboring regions (Figure 2).

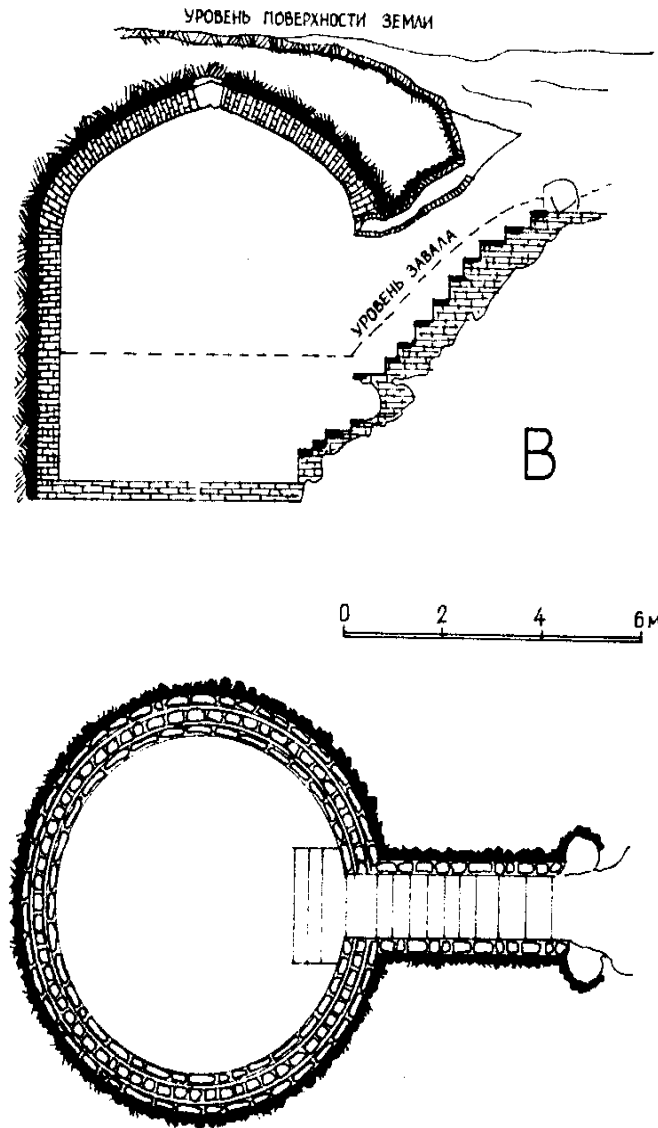


Figure 2. Sardoba discovered near the town of Anau. 15th century (according to G.A. Pugachenkova).

The next stage in the development of sardobas occurred during the era of Timur and the Timurids. However, very few sardobas from this period have survived to the present day. Among them are the Anau sardoba and the Yoghochli sardoba near the city of Jizzakh (Figure 3).



Figure 3. Yoghochli Sardoba near the city of Jizzakh.

During the reign of Shaybanid ruler Abdullakhan II (1557–1598), many sardobas were constructed throughout Central Asia. Among those that have survived to the present day are the Buzachi, Koravulbozor, Maymanok, Abdullakhan, and Begichok sardobas. There are even villages named "Sardoba" in Uzbekistan and Turkmenistan. Along the ancient caravan route from Qarshi to the city of Kerki in Turkmenistan (near the modern village called “Eski Talimarjon”), the ruins of a sardoba named “Sangi Suvloq,” built in the early 17th century, have been discovered. The architectural layout of this sardoba closely resembles a blueprint drawn by an architect from Bukhara, featuring a domed central structure surrounded by an entrance portal, a staircase, and additional rooms and arched verandas intended for travelers to rest temporarily. These rooms and verandas were accessible from the outside. The reservoir of the sardoba was considerably large, with a diameter of 17 meters (Figure 4).

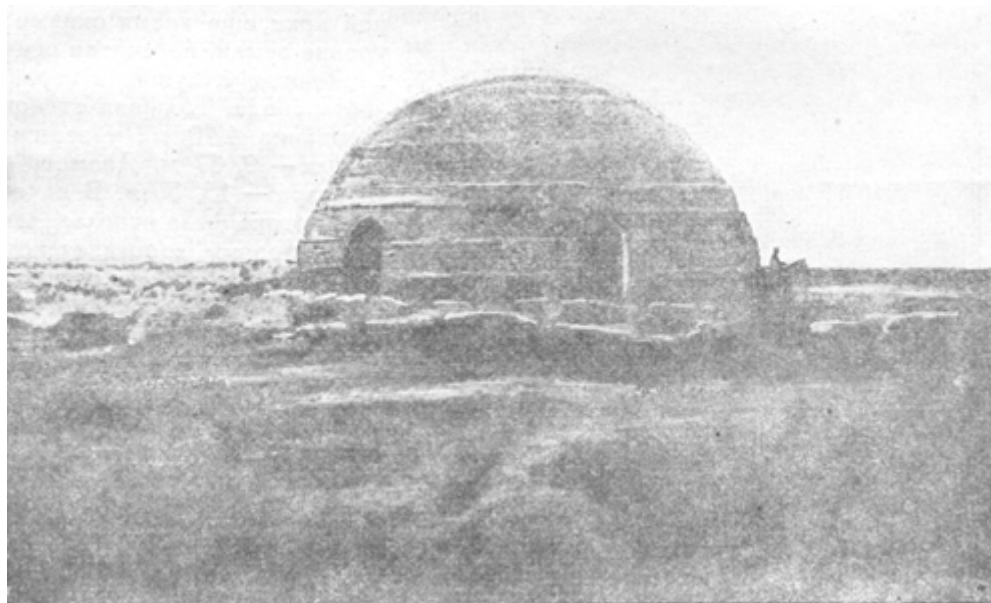
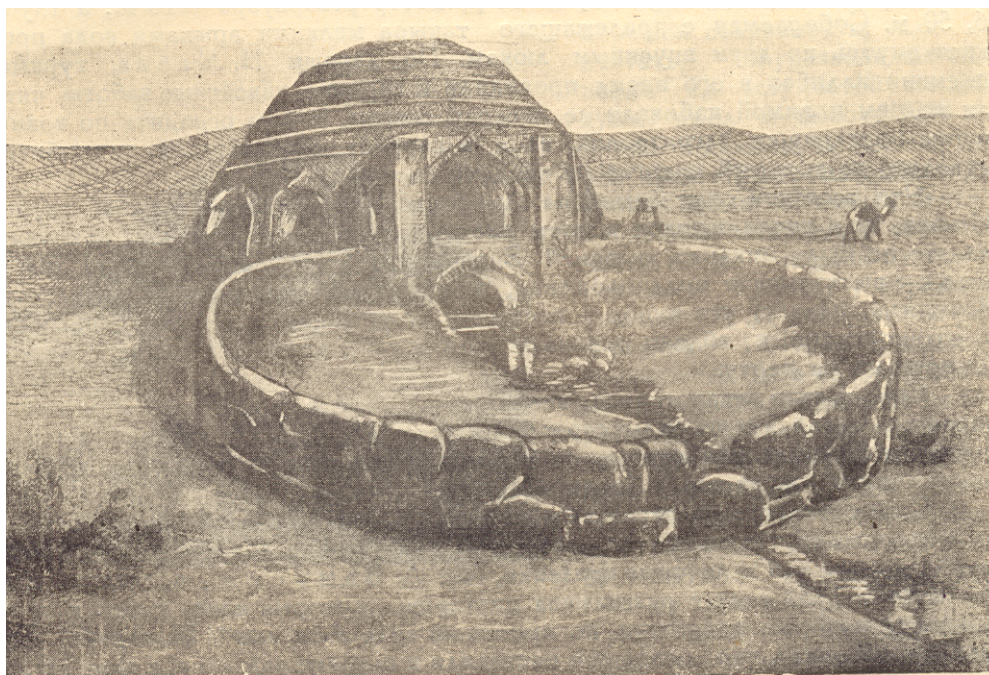


Figure 4. Solitary sardoba in the Qarshi desert (Photo by M.M. Reshetkin)

It is evident that the Sangi Suvloq sardoba is different from the usual sardobas, as it not only served as a water source but also provided a resting place for travelers. Therefore, it can be considered a practical example of the "sardoba maskan" (sardoba with accommodation) depicted in the architectural plans of Bukhara. These sardobas are similar not only in terms of architectural structure but also in their time of creation. In his work on sardobas (1935), E. M. Masson mentioned that "sometimes, in some sardobas, there were rooms for travelers." We believe that Masson was referring specifically to these sardoba accommodations. After traveling approximately 20 km from the city of Navoi towards Bukhara, the remains of the 11th-century Raboti Malik caravanserai are encountered. A sardoba with the same name is located next to it. This sardoba has been restored in the present day. The Russian scholar A. Leman, in his diaries from 1841-42, described this sardoba as a shelter for travelers. This is correct, as wide benches for resting were originally placed around the pool inside the sardoba. Along the ancient caravan route from Qarshi to Bukhara, near the Rabat, the "Kokir sardoba" also had spacious benches around its pool. These benches were accessible via stone stairs. D.N. Logofet, who studied this sardoba in the early 20th century, noted that "the benches were so spacious that large numbers of caravan travelers could easily fit." The size of the sardoba pool was quite large, approximately 15-20 meters in diameter, and the walls beneath the dome were plastered with gypsum. Some sardobas have a structure where the pool and the dome above it are located completely or almost entirely underground, with only the entrance arch and the dome's top visible from the outside. Such sardobas have been discovered in the ancient city of Anau, Turkmenistan. One of the largest architectural monuments in Tashkent, the Abdul Qosim Madrasa, built by Abdul Qosim Eshon in 1850, also contains a sardoba in its courtyard with a dome covering the water reservoir (Figure 5).



5-rasm. Sardoba oldidagi suv tindiruvchining umumiy kurinishi.

Atrofdan oqib kelgan qor va yomgir suvlari avval suv tindirgichda tindirilib undagi, loy hovuz tubiga chukkandan so'ng, toza suv sardobaga quyilgan. Suv tindirgichga chorva mollari kirib suvsni ifloslantirmaslik uchun uning atrofi paxsa devor bilan uralgan. (A. Muhammadjanov buyicha).

The sardoba in the courtyard of the Qutlug Murod-Inoq Madrasah in Khiva (early 19th century) not only has a pool, but its dome is also entirely underground, forming a "well-house" structure. This sardoba is exceptionally well-preserved, and from the outside, only the entrance arch and the dome's top opening can be seen. The common feature of the Anau, Abdul Qosim, and Qutlug Murod-Inoq sardobas is the integration of the pool and dome diameter. Naturally, these types of

sardobas served primarily as sources of drinking water. Thus, the history of the formation of sardobas has gone through a long journey, and their distribution and development in the regions of Central Asia have been largely influenced by the economic trade relations with Eastern and Western countries, as well as the historical-geographical and natural-climatic conditions of the region. Sardobas can be classified into different groups based on their construction sites and architectural-functional solutions. The following table presents the types of sardobas based on their construction locations and the names of those that have survived to the present day.

Centuries	Sardobas Built Along Caravan Routes	Sardobas Built in Cities	Village Sardobas
IX	Sayid Sardoba on the Bezd-Bukhara caravan route	Sardoba of the Friday Mosque in Kufan	
X	Raboti Malik Sardoba		
X-XIII	Raboti Ishkak Sardoba	Sardoba of the Ibn Zeyd Architectural Complex in Marv	
XIV-XV	“Ogochli” Sardoba near Jizzakh	Maymanak Sardoba in Kashkadarya	Sardoba of Anau City near Ashgabat
XVI	Abdullakhon Sardoba near Chorjov	Buzachi Sardoba	Yusuf Sardoba, Qushsardoba, Begichak Sardoba
XVII	Chilgumbaz Sardoba on the Burdalik Caravan Route near Qarshi	Qarovul Bozor Sardoba, Charcha Sardoba in Muborak District, Chigil Sardoba	Sangi Suvloq Sardoba, Qarshi City Sardoba, "Madrasai Dor ush-shifo" Sardoba in Bukhara
XVIII		Sardoba of the Khalifa Khudoydod Khanaqah in Bukhara	Eshoni Imlo Sardoba, Sardoba at the Courtyard of the Qutlug Murod-Inoq Madrasah in Khiva, Sardoba of Qamashi Village in Kashkadarya

From this table, it can be observed that in the past, sardobas were mostly built at crossroads where caravan routes intersected, near caravanserais and rabats, and generally along caravan routes. Sardobas in cities were primarily constructed next to madrasas, khanaqahs, mosques, and hospitals. Village sardobas, on the other hand, were built near larger public buildings or markets.

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