



ACADEMICIA
An International
Multidisciplinary
Research Journal
 (Double Blind Refereed & Peer Reviewed Journal)



DOI: 10.5958/2249-7137.2021.01397.5

THE HISTORY OF THE EMERGENCE OF SARDOB AND THEIR TOMORROW ON THE TERRITORY OF UZBEKISTAN

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ABSTRACT

This article covers the issues of the emergence of the SARDOB - man-made reservoirs - reservoirs, representing a stable form of the design of special medieval hydraulic structures over the centuries, which are monuments of architecture and material culture of the past, as well as their restoration-reconstruction and modern use of them as objects of tourist sites.

KEYWORDS: *Sardoba, Hydraulic Structure, Dome, Water, Cystic, Tank, Reservoir, Reservoir.*

INTRODUCTION

The history of the sardob

The fact that water is hardly the most valuable resource providing the vital activity of all living organisms on our planet know everything. Not only travelers and those people whose professional activities are familiar with drinking water with drinking water are familiar with travel, agriculture, etc.

The name "Sardoba" has two roots: "SARD" - cold raw, wet, and "about" - water. In the word "Sardob" - in the meaning of the spacing, the coolness is called "Items", "cellar", "basement" and other facilities.

As scientific literature testifies, the study of old tanks - Sardoba, scattered through the deserted territories of Central Asian states, began to engage in 1933.

Surgeons - man-made reservoirs representing the form of a stable form of the design of special medieval hydraulic structures that are monuments of architecture and material culture of the past. Their accounting helped to reconstruct the direction of the ancient trade routes, which are often silent writing historical sources.

The shortest roads in the conditions of Central Asian landscapes often ran between oases in hard-to-reach steppe and deserted. Along the caravan trail necessarily, every 15-25 km, comfortable inert courtyards - the caravan of sheds.

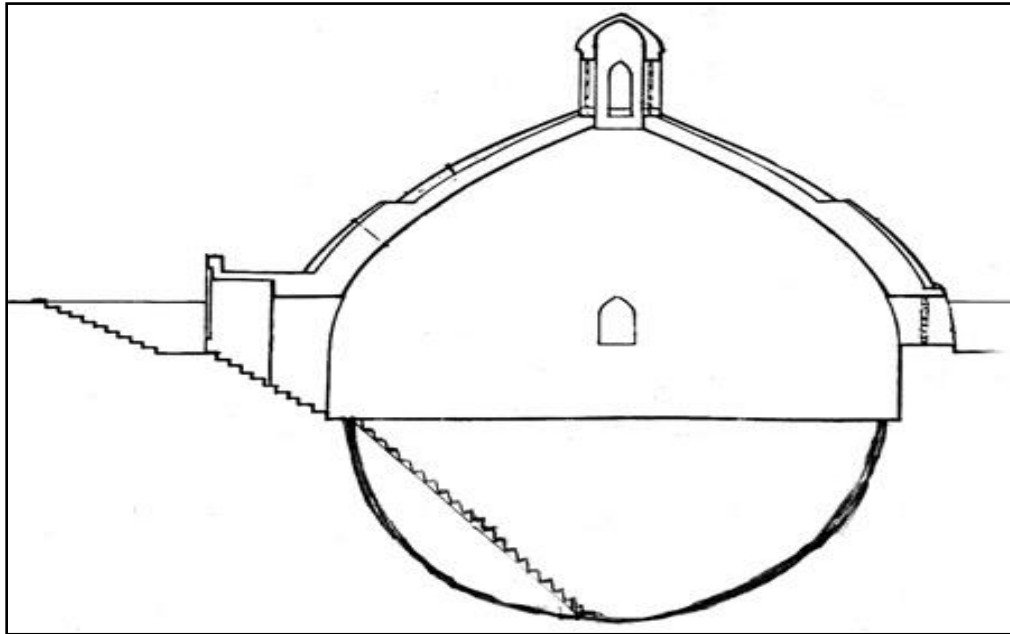
Many of them, if not all, were equipped with baths and toilets, garbage yams - Budabami, system of sewage and water supply systems from ceramic or lead pipes, as well as wells or sardoba's (covered dips with reservoirs). And they were built not just dozens, but hundreds. This is evidenced by written sources, archaeological excavations and architectural monuments.

The idea of creating a Sardob could arise from observational travelers, merchants and cattle breeders when traveling to areas of dense tactics in the rain season or spring. There, rain and snow waters accumulate in fairly significant quantities in natural steppe puddles. In such places, the person developed his skills in the device of in-depth artificial holes, in which the water was delayed somewhat longer.

Fenced with a low clay dowl (wall) in order not to give water to the large surface, reduce the area of evaporation and block access to cattle, such "kaki" keep water until the end of April - the beginning of May.

In the process of improving the pit, the pit was increasingly deepened, and, to fasten its walls, a lining of a burnt brick was used. So first created an open tank, and after the rachises of its dome it turned out the complete hydro technical structure "Sardoba".





Sources of nutrition

By the power source, the sardoba is divided into several groups. Some are designed for thawed and rainwater. When they are constructed, places were chosen in the middle of the flat-bottomed plain depressions with an extensive catchment.

Others - get flow water through the channels derived from the river bed or major trunk canals, sometimes from Kyzyl-Arva (Sardoba near Sauran) in places with a high level of groundwater.

In cases of insufficiency of favorable natural conditions for the flow of water to the tank, water-activated dams were built and artificially in-depth beds. Yusuf sardoba in the Karshin steppe to the tank is suitable somewhat long (1-4 km) and narrow water-driven strokes-canal, with a weakly cracked taking-out surface and traces of ketma. Sometimes one catchment was used near two or more sardobas (like Abdullakhan Surrounds).

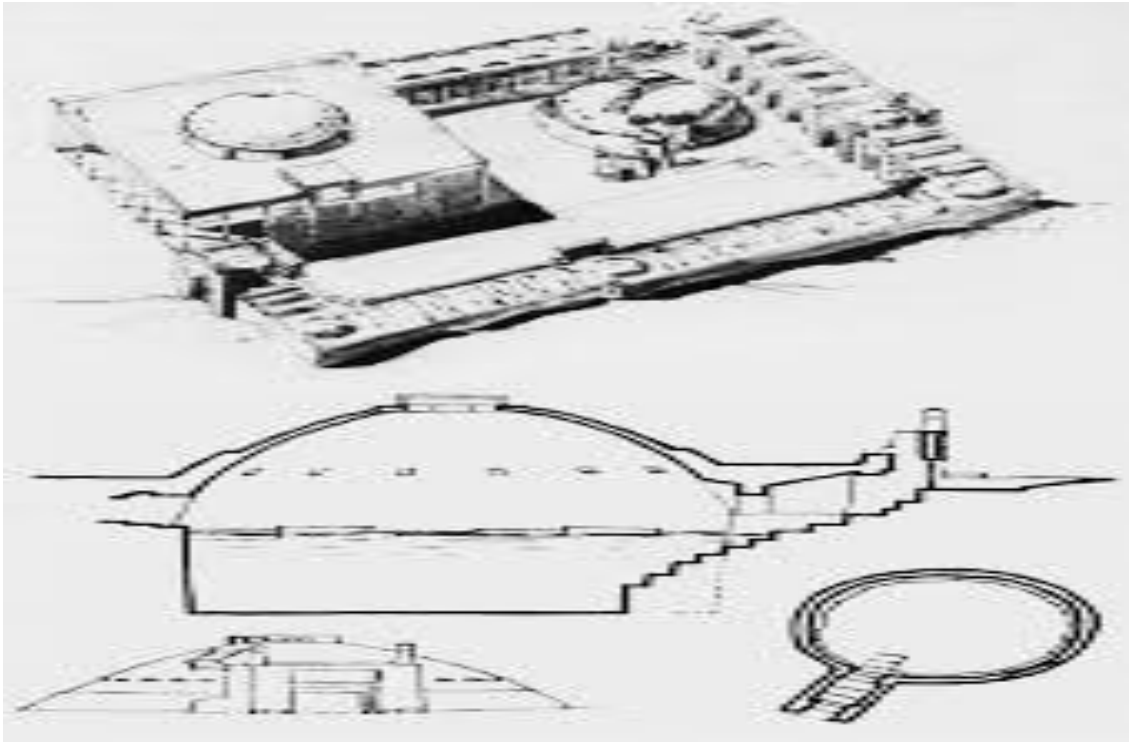
Among the pairs are allocated by Soszardoba and Sardoba Buzachi. When connecting them to the channel, the first could serve as a filter, where the water arrived from the Kashkarya rod. These reservoirs of different sizes are usually a cylindrical shape with a tank diameter of up to 16 meters and a depth of 10-15 meters. The exception is a tank use, which has a cross-shaped in the plan.

Many sardobas had one hatch for the passage of water, similar Bukhara structures were distinguished by the presence of two hatches, and in the sardoba of Abdullakhan, many hatches were arranged around the circumference of the cistern, communicating with each other along an annular trough. Air vents were also installed in the upper parts of the domes. The domes of the floors are flat and elevated. Some sardobas do not have them.

Often, the entrance begins with an arched portal, from which a staircase with brick steps, enclosed in a brick corridor, descends to the bottom of the cistern. Above the latter, premises were sometimes arranged for persons serving and guarding the sardobas, where they climbed up spiral staircases.

Protection of water sources from pollution

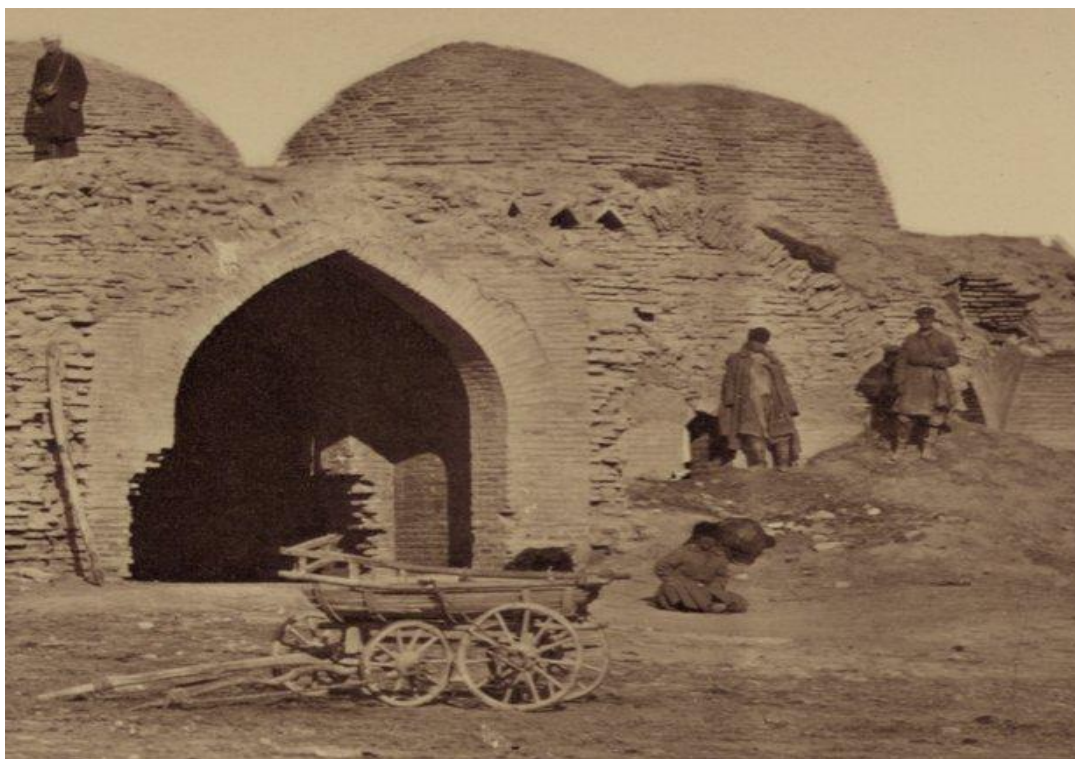
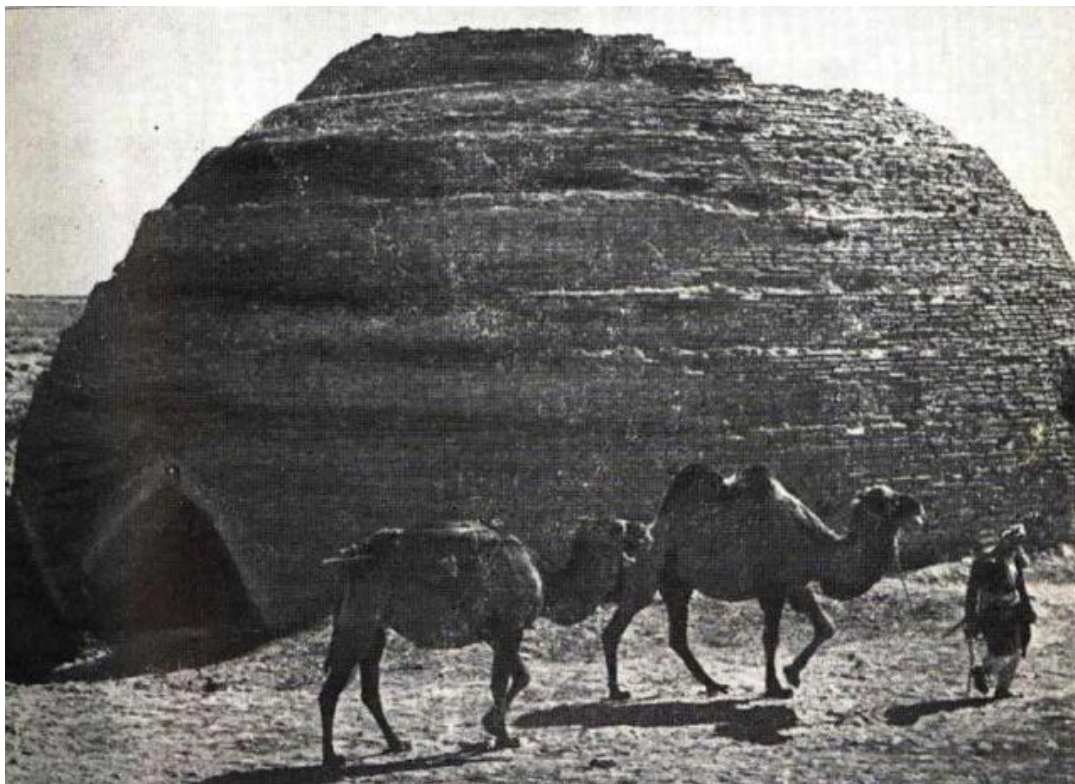
To block the access of animals to the cistern, in order to avoid clogging the water with manure, urine and their fall, at some distance from the sardoba or in front of its entrance, an adobe duval was built, for which horses, camels, and rams were not supposed to be brought in. Occasionally this fence was made of stone, as, for example, at the sardoba of Isfantuda. In small sardobas, like in "what", a flat open reservoir "obkhan" adjacent to the cistern was arranged, surrounded on three sides by an adobe duval, along which a trough-shaped spoon was located on the outside - a small reservoir. Water from the "obkhan" entered it through holes in the duval, plugged with gags, and already from this "trough" the cattle drank water.



Construction quality and cleanliness come first.

The main building material for sardobas in Uzbekistan is flat square baked bricks of high firing quality and strength. Sometimes a stone was laid in the foundation. Also praised are the alabaster mortars on which they are piled, and over the centuries turned into "completely petrified cement".

Among the ruins of the ancient cities of Central Asia, there are domed "ice storages" made of mud bricks, some of which are also sardobas. through the hatches and windows, the water in sardobas was cool and remained usable until late autumn. When the tank was kept clean, the water did not bloom, without showing any signs of deterioration perceptible to the taste.



These monuments of ancient and medieval architecture testify to the ingenious solution of our ancestors to the problems of harmonizing the relationship between man and nature, sanitary

hygiene and waste disposal. Reliable witnesses of these facts are the monuments preserved or excavated by archaeologists, the demonstration and visiting of which, along with competent information, can cause a certain interest both among representatives of the foreign scientific community and among ordinary tourists.

In this regard, one of the most attractive routes may be the eco-tour "In the footsteps of Alexander the Great (Macedonian) and Amir Temur", whose troops also moved along the caravan paths with roadside structures already available at that time with all the services of that time. It is noteworthy that the baths and inns in the states of Central Asia in the Middle Ages were much more comfortable and the service in them, including the sanitary requirements, as well as medical care, were higher than the European standards of those times..

Improvement of the roads of the Silk Road

Improved roads are the most important factor in the progress of states and improving the well-being of peoples, as the entire history of the development of mankind and civilizations testifies. The roads, equipped with roadside and hydraulic structures, served the flourishing of states through the development of trade relations along the Great Silk Road. The predecessors and heirs of this transcontinental Eurasian highway were caravan roads, the routes of which also ran through the Bukhara and Kashkadarya oasis.

Their improvement was not always limited to a high-quality and well-groomed road surface, on which the speed of movement depended ... It was not possible to do this everywhere, especially in steppe or desert terrain, where there were no stones and rocks, like in the mountains. In such cases, in deserted and waterless areas, the improvement consisted, first of all: - in the construction of sound buildings of inns (hotels, caravanserais); - other points of temporary rest and overnight stay - with baths and sanitary facilities; - provision of removable horse-drawn and riding animals (camels, horses, mules, donkeys ...).

In ancient times, these factors were important components of a well-organized antique and medieval service.

Often, inns were located near natural water sources - springs, streams, waterfalls, at the places of crossings (boat, ferry, etc.) across rivers and lakes. Bridges were erected near them, if necessary.

Or they were built near artificial canals, irrigation ditches, water dividers, water pipelines and other irrigation structures were brought to them.

In the steppe and desert areas - their obligatory accessory, in order to ensure life, were wells and kyariz systems built in them or near them, connected by an underground gallery, or reservoirs, houses, seasons etc.



Such hydraulic structures have become a clear evidence of our ancestors' possession of the secrets of skillful water use and water conservation in a desert and hot climate. A special role in the development of agriculture and the creation of oases belonged to the construction of irrigation systems for artificial irrigation (irrigation canals, canals), as well as reservoirs, houses, wells - including in cities and towns, in inns. Their construction has always been considered a godly deed.

They tried to use the ancient sardobas registered in those years for their intended purpose, as reservoirs of melt and rainwater, especially important in the desert karakul regions. The study of sardobas helped to restore the building techniques of old architects, making it possible to use the centuries-old experience of previous generations in modern construction. The researchers noted that when combined with the principle of capturing water from the air, a new type of more rational sardoba could be developed. The solution to this problem is especially relevant today, especially in the waterless steppe and desert regions of different regions of our country. And when solving it, you can use the centuries-old experience of the ancestors of the Uzbek and other Asian peoples.

So, sardobas and other medieval hydraulic structures, as architectural monuments of the Bukhara and Kashkadarya regions, make up the history of architecture of Central Asia with interesting links in the development of creations of the genius logic of medieval architects, preserving the flavor of antiquity and an example of harmonious, ecological relationships between man and nature.

CONCLUSION: This region attracts not only specialists, but also everyone who is interested in the history of the material culture of Uzbekistan. In this regard, we believe that it is necessary to add the above objects to the list of newly created tourist routes in the Bukhara and Kashkadarya

regions, it is necessary to improve them, partially restore them, create the necessary services around and near these objects and increase their attractiveness.

This will allow us to attract the attention of foreign tourist guests, help our compatriots learn the history of our region closer and with their own eyes, this would help in raising our children and youth in the spirit of respect for our history and pay tribute to the genius of our ancestors. Additionally, earn money on this and create new jobs in the tourism industry. Perhaps part of the proceeds will be spent on the restoration and restoration of these ancient monuments, this would ensure their longevity.



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