

Irrigation System during the Reign of Mirzo Ulugbek

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Abstract:

This article provides information about the construction of irrigation networks during the reign of Mirzo Ulugbek, the Mirzaariq stream dug from the Zarafshan river by Mirzo Ulugbek.

Keywords: Irrigation system, irrigation networks, Zarafshan river, Tuyatortar canal.

After the death of Amir Temur, Movarounnahr and Khorasan regions were ruled by Timurids. Amir Temur's creative activity was continued by the Timurid rulers Shahrukh Mirzo, Mirzo Ulugbek, Abu Said Mirzo, Sultan Khusayn Boykara, Zakhiriddin Mukhammad Babur, and minister Alisher Navoi. Under the auspices of the Timurid sultans, large irrigation canals and ditches were dug in Movarounnahr and Khorasan regions, dams were built, the water needs of the population were met, cultivated areas were expanded, and the volume of agricultural products increased.

Mirzo Ulugbek (1394, 1411-1449) was the eldest son of Shahrukh Mirzo. After the death of Amir Temur, after the struggle for the throne, Shahrukh seized power, and then handed over the capital Samarkand to his son Mirzo Ulugbek. Mirzo Ulugbek worked in astronomy and mathematics and turned Samarkand into a center of science.

In the first half of the 15th century, during the reign of Mirzo Ulugbek, the agriculture and irrigation system developed in Movarounnahr, and new lands were developed. New irrigation facilities were dug, water supply of steppe areas was carried out, gardens were established. Abdurazzoq Samarkandi writes that during the reign of Mirzo Ulugbek, Movarounnahr reached the peak of development and huge construction works were carried out. Mirzo Ulugbek built a madrasa and a house facing each other in the center of the city, near the arch. As a result, a large amount of harvest was collected from these lands every year [1:377].

Russian historian and geographer, General Leonid Sobolev, in his monograph, provided information about the ditches that irrigate the lands of Zarafshan district. Sobolov focused on 41 ditches that

supply Zarafshan district with water, included the list of ditches in the table and explained who built the ditches. Mirzaariq started from the village of Shiroz, founded by Amir Temur, and joined the ancient Bulungur stream. According to the Sobolev table, Mirzaariq was built by Mirzo Ulugbek, and when the stream reached the village of Sugut, it joined the Bulungur stream and flowed under the name of Mirzaariq or Bulungur stream[2:79]. In this monograph, it is not explained which source Mirzaariq was built by Mirzo Ulugbek. In our opinion, the researcher wrote that this ditch was built by Mirzo Ulugbek based on the opinions of local residents.

Currently, Mirzaariq supplies water to Jomboy and Bulungur districts. V. L. Vyatkin writes in the historical geography of Samarkand region that the Sultani ditch is now called as Mirzaariq. V. L. Vyatkin says: "Mirzaariq was dug by Mirzo Ulugbek according to a widespread local legend, but the sources reflecting this information belong to later periods"[3:65]. According to V. V. Bartold, Sogdi Kalon district received water from Mirzaariq[4:196]. According to the book "Water of Samarkand", Mirzaariq was excavated by Mirzo Ulugbek around 1430[5]. Historians do not say anything about Mirzo Ulugbek's construction projects outside Samarkand and Bukhara, even about the legend of Mirzaariq excavated from Zarafshan, according to V. V. Bartold's work[6:106].

The military leader and official Georgy Arandarenko wrote about the cisterns in Karshi and the irrigation of the Zarafshan valley during the rule of the Russian Empire. In his work, G. Arandarenko mentioned in detail the size of ditches and irrigated land in the Zarafshan valley at that time. The author writes about Mirzaariq, which was excavated during the reign of Mirza Ulugbek, and gives information about the fact that Mirzaariq irrigates several tens of thousands of acres of land [7:275]. The Russian officer A. Khoroshkhin also touched on the ditches supplying water to the Zarafshan valley and noted that Mirzaariq has a 470-year history [8:120].

According to some sources, the Tuyatortar canal, which takes water from the Zarafshan river and supplies water to the Jizzakh oasis, was dug during the reign of Amir Temur and Mirzo Ulugbek, while other sources say that it was dug in the 16th century. According to the researcher Kh. Khaydarov, the Mokhandaryo expedition organized in 1956 under the leadership of Academician Yakhya Gulomov revealed that the age of the Tuyatortar canal has two thousand years of history. The canal was destroyed in the 6th-8th centuries, then restored in the 9th-10th centuries, and later destroyed again. The canal was finally rebuilt during the Timurid period. After the death of Mirzo Ulugbek, the Tuyatortar channel stopped working again[9:23].

Archaeologists M. Pardayev and S. Suyunov confirm that the Tuyatortar canal was restored during the Timurid era. Archaeologists found the archaeological material from the ruins of Kurgantepa in Gallaorol district and its surrounding monuments, material evidence from the Timurid period from the ruins of Kaliyatepa in the city of Jizzakh and archaeological data from the XIV-XV centuries from the ruins of Orda that are the evidence of the restoration of irrigation canals and the expansion of irrigated cropland in the oasis [10:231]. Based on the above considerations, we can be sure that the Tuyatortar canal was restored during the Timurid era. The Tuyatortar canal was restored in 1912 and in 1921 by the residents of Jizzakh. The Tuyatortar canal was further expanded by the residents of Jizzakh in 1959-1965 [11:28-29]. This canal supplies water to Bakhmal district, Gallaorol district and Jizzakh oasis even now.

During the reign of Mirzo Ulugbek, the expansion of the irrigation networks of the Bukhara oasis was carried out. Lieutenant-General N.A. Ivanov researched the irrigation of the Bukhara oasis and found out that the steppe-desert region and the southern and western districts of Bukhara were irrigated long ago by the water of the ditch dug from the Syrdarya. According to local residents' stories, during the reign of Mirzo Ulugbek, water was brought from Syrdarya through a special irrigation ditch to irrigate the southern part of the Bukhara Khanate. It seems that there is no written evidence of this great work, and it is imprinted in the memory of the people and is being passed down from father to son, writes Ivanov [12]. N. Ivanov's opinion is confirmed by the information

provided by Academician A. Mukhammedjonov: "In Badriddin Kashmiri's work entitled "Ravzatur Rizvan va Hadiqatul Gilman", during the reign of Mirzo Ulug'bek, water was released and developed in the Samonjuq steppe, which approached the southeastern border of the Bukhara oasis [13 :117].

Academician A. Mukhammadjanov, relying on archeological data, said that the western border of the Bukhara oasis became a prairie in the 15th century, dried up due to lack of water in the 12th century, and gradually expanded towards the Varakhsha oases in the south and Khojaporsan oases in the north. First, the archaeologist V.A. Shishkin, and then A. Mukhammadjanov discovered the remains of villages and brick mausoleums of the 15th century in the ruins located between Varakhsha and the Bukhara oasis.

A. Mukhammadjanov found out from the archaeological data that during the reign of the Timurids, the irrigation system of the Bukhara oasis was completely restored and improved, by the time of these, the area of land slightly expanded compared to the agricultural area on the eve of the Mongol invasion, and its western suggests that the border was pushed 5-6 km towards the steppe [14:117]. From this we can see that in the period of Timurids, they effectively used the waters of the Zarafshan River to irrigate the lands of the Bukhara oasis.

During the Timurid era, the Zarafshan River played a major role in the regions considered to be the central regions of Movarunnahr. During that time, irrigation networks receiving water from the Zarafshan River were of great importance. The irrigation networks dug during the reign of Mirzo Ulugbek greatly contributed to the prosperity of the region and the well-being of the population, as well as the growth of the state economy.

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