

IRRIGATION AND RECLAMATION WORKS IN THE SURKHAN OASIS

Shukhrat Ashurovich Allamuratov,
PhD student, Termez State University, Termez, Uzbekistan

Ulmas Charievna Dzhuraeva,
Teacher, Termez State University, Termez, Uzbekistan
E-mail: allamuratovs@tersu.uz

Annotation

The article describes the implementation of large-scale irrigation works in the Surkhandarya oasis in the 50-80s of the twentieth century, in particular, the construction of canals, drainage ditches and collectors. In addition, information is provided on the development of steppe lands in the oasis, agricultural technology, the transition to a new irrigation system and irrigation and reclamation work.

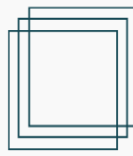
Key words: irrigation system, canals, drainage ditches, drains, reservoir, collector-drainage, canals “Sherabad”, “Zang”, “Tallimaran”, “Kokaydi”, “Yangiarik”, “Khazarbag”, Uchkizil reservoir and South Surkhan reservoir.

Introduction

In 1930-1940, the problem of agricultural production was at the forefront of the problems of the national economy. The Second World War and the Stalinist administrative system of government had also caused serious damage to the agricultural sector. During this period, the irrigation and land reclamation sector of agriculture was in a very precarious position. The main reason for this was that very little money was allocated for the development of irrigation and land reclamation. In addition, the severe complications of the war and the severe shortage of agricultural machinery did not allow the existing opportunities to be used [1]. No attention was paid to increasing the area under cotton, building more irrigation and land reclamation facilities, improving the agro-technical condition of lands, preventing salinization and saline leaching.

Main part

The total length of the canal, built in 1942 in the Surkhandarya oasis, was 49.3 km, of which 21 km passed through the territory of the Republic of Tajikistan and 28 km through the territory of the Republic of Uzbekistan. The construction of this main canal has played an important role in the implementation of large-scale irrigation works in the Surkhandarya oasis. Because it served to meet the water supply needs of many settlements. During the construction of the canal, 5 million m³ of earthworks were carried out, 29,000 m³ of concrete, reinforced concrete and gravel were excavated. The Dushanbe-Karatag canal increased the possibility of irrigating 37,000 hectares of gray

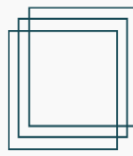


lands [2, p.4-5; 3]. At the X Congress of the Communist Party of Uzbekistan, he set the task of improving the management of agriculture, expanding cotton fields and increasing its yield to 25 centners per hectare. In this regard, the construction of irrigation and mechanization of irrigation and land reclamation has been accelerated. In 1946-1948, great attention was paid to irrigation and land reclamation in the region, reclamation of the Denau-Yurchi swamp, and reconstruction of the Dushanbe-Karatag, Hazarbog and Zang canals improved the water supply of about 40,000 hectares and the development of about 7,000 hectares of new land. . As a result, in 1948 alone, 185 million soums were earned from cotton [4, B.389]. The development of irrigation water networks in Uzbekistan in 1946-1953 led to the expansion of cotton fields, ie the development of new lands [5, l.16].

The resolutions of the XI Congress of the Communist Party of Uzbekistan in September 1952 intensified irrigation and construction work in our region. Increased cotton yield, irrigation and land reclamation works have been carried out in the region, as well as water supply to the settlements of Oktepa, Akkurgan, Zarkamar in the Surkhan-Sherabad oasis and Yangiarik on the right bank of the Surkhandarya. Also in the second half of the 50s the deserts of Beshkotan, Muzrabat, and Istara were developed [4, 396]. Expansion of irrigated lands in the Surkhan-Sherabad oasis, especially in 1949-50, through the transfer of water from the Sherabaddarya and Zang canals to Tallimaron, the canal irrigation system began to work. Collective farms of Jarkurgan and Termez districts rehabilitated the Kokaydi and Yangiarik canals, developed the Oktepa address on the right bank of the Surkhandarya River, and protected lands in the Shurchi, Jarkurgan and Sariasiya districts [6, p.8].

Irrigation and reclamation measures in the Surkhan-Sherabad oasis include the provision of conditions to improve water management in existing systems and irrigation development of the agricultural sector through the development of lands and areas. This is important in the transition of the Surkhan-Sherabad oasis to a new system of irrigation in agriculture, ie the expansion of irrigated areas, water conservation and prevention of soil salinization. As a result, the area under agricultural crops in 1950 was 155.2 thousand hectares, including 59.7 thousand hectares of cotton [7, p.16]. On September 2, 1952, the Soviet government made a special decision to build the Uchkizil Reservoir and open 10,000 hectares of new land in the Surkhan-Sherabad oasis in order to develop the reserve lands.

In 1957, the Uchkizil Reservoir with a capacity of 165,000 cubic meters was built. One of the largest reservoirs in Central Asia is 800 mln. Cubic meters of the South Surkhandarya reservoir. From the reservoir to the Sherabad deserts, a 27-kilometer main canal with a capacity of 110 cubic meters of water per second was laid between the plains and mountains [8; 9]. 34.4 thousand hectares of land have been developed, and state farms named after Yangiabad, Komsomolabad, Sovetabad, A.Nabiev, Lenin and Akhunboboev have been established. Settlements have been erected for state farm

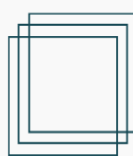


workers, and 147,000 square meters of housing have been commissioned. In the Surkhandarya-Sherabad desert 1 horticultural and 12 cotton sovkhozes were established [4, p.398-399]. Further development of agriculture provided for the cleaning of new waterworks, canals, irrigation canals, improvement of land reclamation. In 1956, the 23 km long Kakaydi and 90 km long Zang canals were put into operation [10, p.92]. One of the largest irrigation facilities in the Surkhandarya Sherabad oasis, the Zang Canal starts 28 km below the South Surkhan Reservoir in the village of Arpapoya in the Jarkurgan district. The rust duct construction system consists of two parts, namely the upper and lower part. The lower part itself is also divided into two: The length of the Tallimarjan canal is 12 kilometers. The upper part of the Zang Canal is 29 km long and passes through the Surkhandarya oasis, and Tallimarjan supplies water to two-thirds of the land in the upper part of the lower Zang Canal, as well as irrigating steppe lands on the southern borders of the Sherabad oasis. As a result of the reconstruction of the rust canal, its total length was increased to 50 km. The annual cost of maintenance, adjustment and protection of the rust canal is 500-850 thousand soums, and in 1955 29 thousand people were involved in the cleaning of the rust canal [11].

In 1954, the Sredazgiprovodkhlompok Institute carried out search and inspection work on the reconstruction of the Zang Canal. In this regard, irrigators led by Chief Engineer E.M. Benyaminovich developed a project for the reconstruction and extension of the Zang Canal. According to the project, a 28 km long South Surkhan Reservoir Dam and 5 km below the existing Zang Canal main structure, a water distribution node from the Surkhandarya River was built.

The canal runs along the right bank of the Surkhandarya, initially bypassing the eastern side of the Khovdag hill, 15 km from Jarqurghon, and 24.8 km from the south along the lower Zang and Tallimaron. At 25.7 km of the Zang Canal, the Tallimaron underwater bridge crosses the Karasuv River and extends through the Beshkoton Massif to the Muzrabat River, where it reaches a 67 km distance and ends with a watershed [12, p.100-101]. During the implementation of these measures, the total volume of earthworks on the Zang Canal was 400,000 m³, and 300,000 m³ of works were carried out on all collective farms for the reconstruction of the internal irrigation and collector system. Total expenditures exceeded 2.5 million soums [13, p.4-5]. In addition, mechanization was used in the Surkhan-Sherabad desert to build new irrigation systems and start collectors.

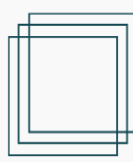
In 1953, 6,000 tractors and 2,200 vehicles were delivered to the agricultural sector in Surkhandarya region. At the September 1953 plenum of the Central Committee of the CPSU, the Soviet government adopted a special resolution "On measures for the further development of agriculture in the USSR" [14, l.120]. According to this decision, a plenum of the Surkhandarya regional committee of the Communist Party of Uzbekistan was held on November 23-24, 1953. Since 1954, the plenum has aimed to increase the area under cotton to 66,800 hectares and the yield to 167,900 [15, p.17-20] tons. The plenum also



adopted an additional decision to increase the development of new lands to 109 thousand hectares and the yield of cotton to 329 thousand [16, p.65] tons.

The area of irrigated lands in the Surkhan-Sherabad oasis reached 158,000 hectares by 1955, and the construction of the Degrez and Uchkizil reservoirs began. A duke was built in the Karasuv canal on the side of Beshkoton and Muzrabat massifs. In 1954, with the withdrawal of water from the Zang Canal and the Sherabad River through the duke, the irrigated area of 1,000 hectares in the Beshkoton massif expanded [17, p.112; 18]. In the same year, 120-130 people were evacuated from Darband and Machay villages of Boysun to develop the Beshkoton steppe [4, p.402]. 800 people were relocated from mountainous villages, 16 farms from Boysun district and 3 farms from Sherabad district were relocated to Beshkoton. Irrigation works in Beshkoton massif were carried out by Sherabad, Angor, Termez, Jarkurgan MTS [17, p.112]. In 1949-1974, the area under crops in the region increased by 64,000 hectares, the area under cotton increased from 53,000 hectares to 106,000 hectares, and cotton production increased from 117,000 tons to 236,000 tons. In 1965, the region supplied more than 305,000 tons of cotton. During 1949-1964, 163.4 million soums were allocated for water management and agricultural construction soums were spent. In 1966, 306 thousand tons of cotton, 4.0 thousand tons of corn, 8.8 thousand tons of rice, 20.9 thousand tons of vegetables, 3.6 thousand tons of potatoes, 31.9 thousand tons of grapes were sold to the state [4, p.403-404]. In the Surkhan-Sherabad oasis, opportunities have been created for the development of agricultural culture as a result of the transition to a new agro-technical, irrigation system, planning the digging of canals, deepening the arable land, regulating water supply, expanding mechanization. In 1954-1958, they gained extensive experience in reclamation and irrigation construction, especially in the construction of waterworks. In 1956-1958, conditions were created for the irrigation of large areas of domestic canals and ditches with a length of 1386 km to 1401 km [19, p.123-130]. Collective farms were established in the Surkhan-Sherabad oasis in the 1950s and 1960s. On February 9, 1961, in accordance with the resolution of the Government of Uzbekistan "On measures to develop and irrigate new lands in the Surkhandarya basin on the basis of the Surkhan reservoir" in 1962 Komsomolabad and Yangiabad farms were established [4, p.402; 20]. New lands were developed in Tallimaron and Beshkoton settlements of Sherabad steppe [21]. However, the collective farms that moved to Tallimaron and Beshkoton were unable to expand the area under cotton and other crops due to lack of technical and logistical bases. This has led to a deterioration of land reclamation, making hundreds of hectares unsuitable for cultivation. Collective farms were not yet fully developed economically.

In 1957-1958, the Central Asian Cotton Institute "Sredazgiprovodkhlopok" carried out project work on the construction of a closed horizontal drainage. The installation of drainage facilities on saline soils was initially tested at the Yangiabad farm. The effectiveness of the use of drainage in irrigation and land development has paid off in

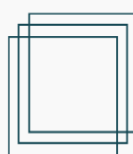


the early years. In 1957-1958, 4,000 hectares of land in the Surkhan-Sherabad oasis were developed, concrete canals were laid, and 58 km of open and closed collector-drains were installed [22; 23]. As a result of the widespread development of irrigation and irrigated agriculture in the Surkhan-Sherabad oasis, the area under crops has doubled [24, p.45; 25]. In the southern part of the Sherabad river basin, the main part of arable lands is 125 thousand hectares, and 20 thousand hectares of arable lands are calculated in the Khojaipok river basin in the upper part of the oasis [26, p.23].

Soil salinity and the deterioration of irrigation structures have led to a decline in soil fertility due to the non-digging of ditches and ditches. Farms in the Surkhan-Sherabad oasis have been severely affected by salinization. Due to the fact that the Sherabad canal, the Zang and Tallimaron canals are not well cleaned and rehabilitated, water shortages have occurred and the salinity of the land has increased from 10% to 20% due to high salinity. No serious attention was paid to saline land reclamation and reclamation works [27]. In 1958, 1,000 hectares of land in the Surkhan-Sherabad oasis were salinized and the reclamation status was disturbed. In order to expand the cotton fields, the Government of the Republic has allocated additional funds for the construction of new reservoirs, reservoirs and canals in Surkhandarya region. In 1961, the construction of the South Surkhan reservoir with a capacity of 800 million cubic meters was started on the territory of the state farm "30 years of VLKSM" in Shurchi district. The average height of the reinforced concrete wall of the reservoir is 30 meters, the width of the top is 10 meters, the length is 5.4 km, and the total level of the reservoir is 65 km. The height of the dam is 29 meters, the right part of the platinum has a capacity of 150 cubic meters per second, the left part has a capacity of 25 cubic meters [28].

Surkhan Reservoir irrigates 86,400 hectares of protected land and provides water to 126,000 hectares of land in total [4, B.406]. Eighty percent of the irrigated land in the southern regions of the region falls within the capacity of the Southern Surkhandarya Reservoir [29, p.115]. The construction of the first stage of this "South Surkhan Reservoir" in 1965 amounted to 400 mln.m³ ended with water accumulation [30]. In 1967, the construction of the "Southern Surkhan Reservoir" was completed [31, p.2]. By January 1973, the length of all irrigation networks was 6,185 km, including 1,655 km of concreted perimeter, and 817 various engineering and hydraulic structures were built in irrigation systems [32].

In order to improve the reclamation of lands, 4600 km long, including 2850 km closed drainage collector-drainage networks were created [4, B.408-409]. By the end of the 1980s, agricultural machinery in Surkhandarya region had deteriorated, and land reclamation had deteriorated. Due to the fact that the open collector network has not been cleaned for years, water accumulation has increased and thousands of hectares of arable land have become unusable [33]. This was especially noticeable on farms in Angor, Muzrabad, Sherabad and Kizirik districts.



Conclusion

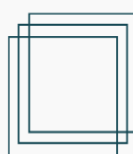
In general, the newly developed lands in the Surkhan-Sherabad oasis, the reconstruction of old irrigation systems and the construction of new main canals and reservoirs in the field of irrigation and land reclamation throughout the Surkhandarya oasis have served to increase the living standards of the population. It also created the conditions for the development of the agricultural sector. However, the agricultural reforms implemented by the former Soviet government,

Development of new lands, repair and reconstruction of irrigation systems have been adapted to the interests of the Center brought.

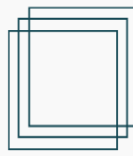
Many canals, ditches, ditches and built waterworks were built on a large scale, however, serious mistakes in water use and the lack of a scientific basis for land development have led to the abandonment of thousands of hectares of land as a result of wasted water. Although the irrigation networks built for the irrigation system were built according to a long-term plan, however, due to its poor quality and water capacity, water storage capacity was not properly taken into account, they quickly fell into disrepair and became unusable.

References

1. Ashurovich A. S. Craft and trade relations in eastern beks of the Bukhara emirate //ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL. – 2021. – Т. 11. – №. 2. – С. 1376-1380.
2. Irrigation of Uzbekistan.-Т. «Gosizdat UzSSR», 1959. –S.4-5.
3. Allamuratov S. A. The role of the Amudarya waterway and the Surkhan oasis crossings in trade relations of the Emirate of Bukhara. Actual problems of modern science, education and training. Vol. 5, Issue 1 //October.(in English). – 2020.
4. Tursunov S.N. et al. History of Surkhandarya. - Т.: “Shark”, 2004. p.389.
5. Archive of the branch of Surkhandarya region khokimiyat, 1 fund, 3 lists, 3 works, 16 pages.
6. Istomin M.S. Osvoenie novyx zemel v Surxandari. Journal «Sotsialisticheskoe selskoe khozyaystvo», 1954, №2. – S.8.
7. Archive of the branch of Surkhandarya region khokimiyat, 45 fund, 1 list, 26 works, 16 pages.
8. Allamuratov S. A. THE ROLE OF THE AMUDARYA FLEET IN THE ECONOMIC LIFE OF THE EMIRATE OF BUKHARA AT THE END OF THE 19TH CENTURY-THE BEGINNING OF THE 20TH CENTURY //Ўтмишга назар журнали. – 2019. – Т. 21. – №. 2.
9. Турсунов Н. Н., Алламуратов Ш. А. ЭТНИЧЕСКАЯ ИСТОРИЯ ГОРЦЕВ ЮЖНОГО УЗБЕКИСТАНА //Бюллетень науки и практики. – 2020. – Т. 6. – №. 6.



10. Narodnoe khozyaystvo Uzbekskoy SSR for 50 years. Collection of statistical materials. T., «Uzbekistan», 1967. S.92.
11. Алламуратов Ш., Джураева У. XIX аср охири–XX аср бошларида шарқий Бухоро бекликларида савдо-сотик ва ҳунармандчилик муносабатлари //Общество и инновации. – 2021. – Т. 2. – №. 3/S. – С. 105-110.
12. Tursunov S., Tukhtaev A. Jarkurgan.– Т.: “Fan”, 2008. P.100-101.
13. Archive of the branch of Surkhandarya region khokimiyat, 45 fund, 1 list, 41 works, page 4-5.
14. Archive of Surkhandarya regional khokimiyat branch of UzPA. Fund 1, list 12, work 23, page 120.
15. Archive of the Surkhandarya regional khokimiyat branch of the UzPA. Fund 1, list 13, work 10, pages 17-20.
16. Sbornik dokumentov i materialov Tsk KPSS i Sovetskogo pravitelstva / 1953-1958 gg /, -M., “Politizdat”, 1961.-S.65.
17. Archive of Surkhandarya regional khokimiyat branch of UzPA. Fund 1, list 13, pages 93,112.
18. Алламуратов Ш. А. БУХОРО АМИРЛИГИНГ АМУДАРЁ СУВ ЙЎЛИ ВА КЕЧУВЛАРИ ОРҚАЛИ САВДО МУНОСАБАТЛАРИ //ВЗГЛЯД В ПРОШЛОЕ. – 2021. – Т. 4. – №. 4.
19. Archive of Surkhandarya regional khokimiyat branch of UzPA. List 14, page 11, pages 123-130.
20. Турсунов Н. Н., Алламуратов Ш. А. Развитие торговых отношений и ремесел в бекствах Восточной Бухары //Бюллетень науки и практики. – 2021. – Т. 7. – №. 3. – С. 348-353.
21. «Leninskoe znamyu», July 3, 1954.
22. Igor Surkhan uchun, December 22, 1958.
23. Алламуратов Ш. А. История амударьинского судостроения //Бюллетень науки и практики. – 2020. – Т. 6. – №. 10.
24. Archive of the branch of Surkhandarya region khokimiyat, fund 112, list 1, work 313, page 45.
25. Хужаназаров А. З., Алламуратов Ш. А. РЕФОРМЫ В СИСТЕМЕ ЗДОРОВЬЯ УЗБЕКИСТАНА В ПОСЛЕДНИЕ ГОДЫ //Наука, техника и образование. – 2021. – №. 1 (76). – С. 19-23.
26. Archive of Surkhandarya regional khokimiyat branch of UzPA. Fund 1, list 18, work 2, page 23.
27. Khuzhanazarov A. Z., Allamuratov S. A. LOOK AT MEDICINE ATTENTION: PROBLEMS AND SOLUTIONS //Ўтмишга назар журнали. – 2019. – Т. 24. – №. 2.



28. Хужаназаров А. З., Алламуратов Ш. А. Система здравоохранения в Узбекистане: проблемы и реформы // Бюллетень науки и практики. – 2021. – Т. 7. – №. 2.
29. Central State Archives of the Republic of Uzbekistan, fund 2483, list 1, work 1359, sheet 115.
30. "Lenin's Flag", January 10, 1962.
31. "Rules of exploitation of USV". -Т., 1986.
32. Хужаназаров А. З., Алламуратов Ш. А. РЕФОРМЫ В СИСТЕМЕ ЗДОРОВЬЯ УЗБЕКИСТАНА В ПОСЛЕДНИЕ ГОДЫ // Экономика и социум. – 2021. – №. 1-2. – С. 699-705.
33. Ziyadullayevich K. A. Healthcare system in the surkhandarya region: reforms and results (on the example of the kumkurgan district) // ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL. – 2021. – Т. 11. – №. 2. – С. 1395-1399.