

Impact Factor:

ISRA (India) = 3.117
ISI (Dubai, UAE) = 0.829
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHHI (Russia) = 0.156
ESJI (KZ) = 8.716
SJIF (Morocco) = 5.667

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2019 Issue: 07 Volume: 75

Published: 24.07.2019 <http://T-Science.org>

QR – Issue



QR – Article



Oybek Kamilovich Komilov
Andizhan State University
Doctor of Historical Sciences (DSc),
Professor of the chair of “Theory of civil society”,
Republic of Uzbekistan

THE HISTORY OF THE DEVELOPMENT IRRIGATION AND LAND-RECLAMATION IN UZBEKISTAN AND ITS EFFECTS (1950-1990)

Abstract: In the article it is analyzed the policy of the centre of the further strengthening mono cultural clap in Uzbekistan that in undertaken measures on building of large irrigation canals and pumping stations in republic on the bases of archival sources and periodical materials in 1950-1990.

Key words: irrigation, land-reclamation, irrigation canal, pumping station, siphon, collector, drainage, development, water reservoirs, Soviet government, centre, cotton monopoly.

Language: English

Citation: Komilov, O. K. (2019). The history of the development irrigation and land-reclamation in Uzbekistan and its effects (1950-1990). *ISJ Theoretical & Applied Science*, 07 (75), 265-269.

Soi: <http://s-o-i.org/1.1/TAS-07-75-42> **Doi:**  <https://dx.doi.org/10.15863/TAS.2019.07.75.42>

Classifiers: Geography. History. Oceanology. Meteorology.

Introduction.

In agriculture system of all countries around the world, as well as in ensuring the success of their economic development, irrigation and reclamation industry has always occupied an important place. In particular, the local agricultural irrigation traditions gradually evolved over the centuries, and the culture of irrigation, peculiar to each country, has obtained its own unique and individual characteristics. After getting Independence in the Republic of Uzbekistan in its irrigation system, as well as in every other sector of the country, huge radical reforms, entailing significant changes were made. Applying and exploring the modern methods and experience in reclamation received much attention, as the aim was to maintain the whole agriculture system through appropriate irrigation. The reason was that “...our agriculture is the irrigated agriculture. Huge channels, irrigation and drainage network in conjunction with irrigated fields form the united complex of the water and the land”[1, p.310].

Research methods.

Indeed, it is appropriate to note that the irrigation and drainage sector has always occupied an important place in society. Truthful investigation and study of

the past activities in the irrigation processes will have a significant impact on their future development. From this perspective, the study of irrigation history of the twentieth century, namely the Soviet period in the system of irrigation up to the era of Independence (1950-1990 years) in the spirit of our National Idea is one of the most urgent tasks. Since the 50s of the twentieth century, the Soviet government made a special emphasis on the development of irrigation, land reclamation and mechanization, as well as on the construction of irrigation facilities. All these actions had an aim to develop the cotton production in the country, and all forces were thrown into this production with the only purpose to achieve high productivity in it. In the 60s, the widespread use of virgin and fallow lands, construction of reservoirs - system of ditches, as well as the usage of river water in large amounts for irrigation, has deteriorated the quality of water in those rivers' pools. The regularity of such actions led to the fact that arable land began to go out of service; land reclamation condition deteriorated and fell into disrepair; the salinity of the soil increased - and all these in unity contributed to a drop in yield.

The thesis points out that to ensure the rapid development of cotton growing the totalitarian

Impact Factor:

| | | | | | |
|-------------------------|----------------|-----------------------|----------------|---------------------|----------------|
| ISRA (India) | = 3.117 | SIS (USA) | = 0.912 | ICV (Poland) | = 6.630 |
| ISI (Dubai, UAE) | = 0.829 | PIHHI (Russia) | = 0.156 | PIF (India) | = 1.940 |
| GIF (Australia) | = 0.564 | ESJI (KZ) | = 8.716 | IBI (India) | = 4.260 |
| JIF | = 1.500 | SJIF (Morocco) | = 5.667 | OAJI (USA) | = 0.350 |

government used to issue multiple series of decrees and orders. Naturally, as irrigation works in those decrees and orders received the most serious consideration. Among them, the decree of the USSR Council of Ministers and the CPSU Central Committee "On the further development of cotton production in Uzbek SSR on 1954 - 1958 years" from February 9, 1954, which planned the expansion of irrigated areas (600 thousand hectares, including the cotton fields on 300 ha.), significant land improvement and providing the rational use of water in the state and collective farms [2, p.96]. The decision, along with the development of cotton production confirmed the increase of its monoculture policy in comparison with the previous years.

Under the influence of the colonialist government's agricultural policy in the 50-60s of the XXth century the amount of irrigated area in the country increased rapidly. Including the fact that, during the seven-year period (1959-1965) commissioning of irrigated land totaled 381.8 thousand hectares, which for years was divided as follows: In 1959 it was 27.0 thousand hectares, in 1960 - 42, 0 thousand hectares, in 1961 - 40.0 thousand hectares, in 1962 - 74.0 thousand hectares, in 1963 - 80.0 thousand hectares, in 1964 - 56.0 thousand ha, in 1965 - 62, 8 thousand. ha [3, p.254]. At the same time, the Soviet Government has created many artificial canals and pumping stations to provide water for hillside areas where the natural irrigation was not possible. Many activities to improve and maintain their technical condition have been developed. On July 12, 1952 the Ministry of cotton production of the USSR issued a decree "On measures to improve the technical condition of the Great Fergana Canal named after Stalin."

The main objective pointed here was the extensive use of water resources in order to improve the technical condition of the channel, and the development of irrigation of the Ferghana Valley. In accordance with this decree, the Minister of Water Resources of the Uz SSR and the Chief Operating Manager of the Big Fergana Canal received the order, in the term of 3 months in cooperation with the local organizations, to optimize the staff of the management, and to provide the controlling and hydro-technical areas with highly skilled professionals. During 1953, it was entrusted to make cleaning of the Grand Fergana Canal in the area from the dam of Kuyganyar until the Asaka siphon, and complete cleaning of the South Fergana Canal. In 1955-1959, in the Fergana Valley they built 9 pumping stations, providing water for 10 thousand hectares. At the same time, the collector-drainage system's length has reached 37 thousand km. In order to avoid the disappearance of the filtered water, during seven years (1959-1965) in the areas with water shortage, 545 km of water channels were covered by concrete.

On February 17, 1970, the Central Committee of Communist Party of Uzbekistan and the Council of Ministers of the UzSSR adopted a resolution "On the second stage in the construction of the Amu-Bukhara Canal." It noted that the transferring the water from the Amu Darya and the oasis of Small Zarafshan for the first phase of construction of the Amu-Karakul and Amu-Bukhara Canal has increased the water supply of irrigated land in Bukhara, Samarkand and Kashkadarya regions. It was promised, that the commissioning of the second phase of the channel would allow increasing cotton procurement to 100 thousand tons; to receive additional horticultural products and more fully utilize the capabilities of agricultural production. However, these actions, in their turn, led to even more strengthening the Soviet policy of the cotton monoculture in comparison with the previous years.

The article presents the facts that following the decree of the Central Committee of CP of Uzbekistan and Council of Ministers of the Uz SSR from December 21, 1964: "On measures for the expansion of irrigated land in the Samarkand, Bukhara and Kashkadarya regions, as well as updating the technology of irrigation systems and further increase in the water supply of irrigated areas", in January 6, 1965 the Ministry of Water Resources of UzSSR issued an order. According to it, the Ministry of Production and Procurement of Agricultural Products in cooperation with the Ministry of Water Resources accepted the proposal of the Executive Committees of Samarkand, Bukhara and Kashkadarya regions and made the decision to develop, over the 1965 -1970 years, 94 thousand hectares of reserve and new lands, including 15 ha - for the construction of the Amu-Karakul canal, 24 thousand ha - for the construction of the Amu-Bukhara canal, 27 ha - to increase Kattakurgan reservoir, and on the areas which have made an offer - to develop 28 thousand ha - for Chimkurgan, Pachkamar and Kalkamin reservoirs construction [4, p.141].

The Soviet government from year to year continued to increase investment funds for the development of the water management and the rehabilitation of land. In particular, into this industry in 1951 72.9 million rubles were invested, in 1952 - 54.4 million rubles, in 1953 - 82.7 million rubles. From 1953 to 1955, about 450 million rubles were spent. In 1955, in the water sector there were 800 excavators, about 700 different mechanisms for digging earth and 137 dredging pumps. Mechanization of soil works grew by 70%. In the next five years, funds spent for irrigation system have increased even more. "If in the 1956-1960 years 402 million rubles has been spent for this industry, then in 1961-1965 it was 951 million rubles, in 1966-1970 - 1 billion 793 million rubles, in 1971-1975 - 3 billion 750 million rubles, in 1976 -1980 - 5 billion 750 million rubles, in 1981-1985 - 6.4 billion rubles." [5, p.58]

Impact Factor:

| | | | | | |
|-------------------------|----------------|-----------------------|----------------|---------------------|----------------|
| ISRA (India) | = 3.117 | SIS (USA) | = 0.912 | ICV (Poland) | = 6.630 |
| ISI (Dubai, UAE) | = 0.829 | PIHHI (Russia) | = 0.156 | PIF (India) | = 1.940 |
| GIF (Australia) | = 0.564 | ESJI (KZ) | = 8.716 | IBI (India) | = 4.260 |
| JIF | = 1.500 | SJIF (Morocco) | = 5.667 | OAJI (USA) | = 0.350 |

On February 12, 1978 the board of the Ministry of Land Reclamation and Water Resources of UzSSR adopted a resolution "The results of implementation of the plan for the capital construction and contract work of the Ministry of Water Resources Uz SSR project organizations for 1977 and the tasks for 1978"[6]. This resolution notes that during 1977 the Ministry of Water Resources has used the capital fund in the amount of 652.1 million rubles (or 100%). From that, 539 million rubles were spent on the construction and installation works. The plan for the commissioning of new irrigated land is exceeded by 103% (total 43.0 thousand hectares while only 41.56 thousand hectares were planned), the plan for land reclamation is exceeded by 118%, and the plan in providing water for the irrigated land is exceeded twice.

Arranging and maintaining of irrigation and reclamation work at a high level directly depends on the skills of personnel working in this area. However, in the Soviet period, only specialists of Russian nationality filled the offices of water conservancy industry. In 1955, in the secondary educational establishments - technical schools, training staff for the field of irrigation systems, from 2483 students only 1056 (42%) were representatives of the local population, among whom there were only 7 girls - Uzbeks. In some technical schools due to lack of classrooms, classes were held in two shifts, and because of the lack of dormitories, 1,700 students were accommodated in the private houses [7, p.44].

In training irrigators with higher education, Tashkent Institute of Engineers of Irrigation and Mechanization in Agriculture, during the tenth Five-Year Plan period (1976-1980) the system of training of engineers has become more appropriate. In particular, "It is in this five-year period by 18 faculties, functioned in its three branches, 14.5 thousand students were trained (including 9000 full-time students). They were educated at 14 different engineering and technical fields. The annual reception at the institute was 3740 people. Each year, it released 1980 engineers (of which more than 1500 had full-time of study). During its working years, for the needs of the national economy, the Institute has trained totally of more than 28,000 professionals, including 7350 of specialists released only during the tenth Five-Year Plan."

In 1981-1982, the Ministry of Water Resources of UzSSR and the Ministry of Agriculture received the order to send to the organization of water management in its state and public sectors 839 engineers, and 1383 technician in land reclamation, as well as a large number of experts on electrification, mechanization and hydro-technical construction. In 1983, the UzSSR water management organizations were provided by engineers in land reclamation almost up to 74% (in 1980 the figure was 68%) [8, p.24]. During the Eleventh Five-Year (1981-1985) among the total

number of the trained staff, the machine operators were 63.4%, irrigators - 14.2%, breeders - 13.4%. Totally 212 permanent courses organized at vocational - technical schools conducted their training.

Irrigators from Uzbekistan effectively participated in the construction of irrigation facilities, not only within the country but also abroad. As a result of the activities, carried out within the framework of Uzbek-Afghan cooperation 25 million hectares of previously abandoned, thirsty land were irrigated. "In the new lands large mechanized state farms were built. They were specialized in the production of citrus, olive, meat, and dairy products." With the help of Uzbek professionals in the center of the Nanhargar region of Afghan – the city of Jalalabad – such farms as "Hadda", "Jumhuriyat", "Batikot" and "Ghaziabad" were put into operation. In particular, in the works for processing and commissioning of 2200 hectares of the stony soils, located in the farm "Jumhuriyat" an Uzbek hydraulic engineer T. Hodjiboev actively participated [9]. In the reclamation of 50 thousand hectares of West Maskene steppe in Syria a qualified hydraulic Uzbek engineer A. Ra'zakov participated [10]. Totally, 26 state farms contributed in the case of the steppes' development. Hydraulic engineers S.Yakubbekov, D. Karimov and S. Samsakov took part in the various activities of the project. Uzbek irrigators D. Kuldashev, O. Rahimboev, A. Khasanov, A. Vohidov, Y. Qodirov, N. Abdullayev, T. Kenjaev, I. Nazirov, and M.Abdullayev took part in the work on the reclamation and commissioning works in the state farm "Mezerpane" located in Nampula province, Republic of Mozambique. Among them, D. Kuldoshev from Andizhan (Uzbekistan) actively participated in the works on operation and maintenance of the "Namioza" Reservoir - small reservoir with barrage (the volume - 1 million 200 m³), and the Reservoir "Impiezi" (the volume - 1 million m³). On his initiative, on the farm 14 hectares of land and savannah, overgrown with bushes, were assimilated in 1981-1983. Thus, the funds allocated by the Soviet government in the construction of water management, aimed primarily at the development of cotton production and at obtaining a greater yield from it. However, the financial resources spent on this sector for the most part did not justify themselves. In the training system for the irrigation field one-sided principle predominated. Nevertheless, in spite of colonial conditions, which Uzbek people were in, experienced and highly skilled irrigators have grown in its midst, who took an active part in the land reclamation and the construction of irrigation facilities in foreign countries. Construction of irrigation facilities and commissioning of the irrigated land by agriculture successively continued throughout the Soviet period.

However, since the second half of the 70s the amount of irrigated land started to decline sharply

Impact Factor:

| | | |
|--------------------------|------------------------|----------------------|
| ISRA (India) = 3.117 | SIS (USA) = 0.912 | ICV (Poland) = 6.630 |
| ISI (Dubai, UAE) = 0.829 | PIHHI (Russia) = 0.156 | PIF (India) = 1.940 |
| GIF (Australia) = 0.564 | ESJI (KZ) = 8.716 | IBI (India) = 4.260 |
| JIF = 1.500 | SJIF (Morocco) = 5.667 | OAJI (USA) = 0.350 |

from year to year. In particular, if in 1976-1980 482.1 thousand ha of land was put into operation, then in 1981-1985 this figure fell to 429.9 thousand ha, and finally in 1986-1990 the figure was only 159.4 thousand ha. However, despite the fact that in this period enough funds were allocated for the land improvement, the quality of the land was not satisfactory. In particular, "according to the data for 1986, 15 per cent of 500 thousand ha of irrigated land did not meet the necessary requirements." All the conditions mentioned above led to a decrease in yield obtained from the irrigated fields and to dropping them out of operation in agriculture. The Soviet Government and its officials from year to year extended their policy on the construction of water reservoirs. In particular, "Related to the construction of irrigation systems during 1981-1990 in the Republic the number of active reservoirs reached 23, construction of 15 was still going on, and there were carried works on designing of 6 more new reservoirs." As is clear from all of the above information, the main goal of the Soviet government in the construction of reservoirs was saving water and developing cotton growth.

In 1981, in Namangan region in the state grape farm "Samarkand," the executive committee of the district council, based on the decision from 14 July of the same year, has allocated 630 liters of water, which made 65% of total plants water maintenance. Besides, in a result of numerous breakdowns at pumping station "Kukumboy" and its negative impacts on the environment 100 hectares of cotton, 90 hectares of maize, 10 hectares of beets, and 16 hectares of gardens have dried up, thus, the station did not justify the costs allocated for its construction.

Carrying regular activities on the development of land and excessive construction of irrigation facilities

in the end led to a shortage of water and to the global tragedy - the drying of the Aral Sea. As a result, the degree of water supply of irrigated land available in the area of the Aral Sea basin fell significantly. In particular, "out of 7 million hectares of irrigated land in the Aral Sea basin the level of water provision of about 2.5 million hectares was below 85%. In the region due to lack of 10-12 billion. m³ of water each year reduction in agricultural yields exceeded 600 billion rubles.

Conclusion.

As a conclusion it is fair to emphasize that in 50-80 of the XX century irrigation developed in Uzbekistan in accordance with the agrarian policy of the Soviet authority. The development of irrigation and establishment of cotton monopoly in the Republic caused to lots of critical aspects. This policy, particularly, increased the dependence of the Republic to the center on the provision of people with grain and food-stuffs. As irrigation-land-reclamation developed highly at the result of cotton monopoly in the republic the land began to lose its fertility, deficiency of water resources increased year by year.

In general, during the Soviet era the government ignored the problems of life and health of the local population and the fate of the inhabitants of the Aral Sea coast region. In order to increase cotton yields, in unlimited amounts they used toxic chemicals. Naturally, this process affected on the health of the population of the Aral Sea coast, the health of women and children, causing the occurrence of various diseases associated with the environment conditions. In the area year after year, the number of difficult-to-cure diseases was growing.

References:

1. Karimov, I. (2011). *Uzbekistan is on the threshold of Independence*. Tashkent: Uzbekistan.
2. Igamberdiyev, R., & Razzakov, A. (1978). *History land-reclamation in Uzbekistan (as an example Mirzachul)*. Tashkent: Science.
3. Mamedov, A. M. (1967). *Development irrigation in Uzbekistan*. Tashkent: Science.
4. (n.d.). Central State Archive RUz, Fund. R.2483, List.1, Collective volume 1993, page 141.
5. Razzakov, A. A. (1991). *Water and life*. Tashkent: Labour.
6. (n.d.). From the material of the general report for 1978th current archive of the irrigation system of the Norin- Karadarya rivers' basin management under the Ministry of agriculture and water resources. RUz.
7. (n.d.). Ferghana State Regional Archive, Fund 711, List.1, collective volume 71, p. 44.
8. (n.d.). Namangan Region State Archive, F. 275, L. 1, cv. 3620, p. 24
9. (2016). The information is taken from the interview with T.Hodjiboev (born on 20.02.1950 in Andijan region) who was sent to Afghanistan in 1986-1988 by Ministry of water resources of

| | | | |
|-----------------------|---------------------------------|-------------------------------|-----------------------------|
| Impact Factor: | ISRA (India) = 3.117 | SIS (USA) = 0.912 | ICV (Poland) = 6.630 |
| | ISI (Dubai, UAE) = 0.829 | PIHHI (Russia) = 0.156 | PIF (India) = 1.940 |
| | GIF (Australia) = 0.564 | ESJI (KZ) = 8.716 | IBI (India) = 4.260 |
| | JIF = 1.500 | SJIF (Morocco) = 5.667 | OAJI (USA) = 0.350 |

- UzSSR to work on the reclamation of the virgin lands (19.07.2016)
10. (2016). The information is taken from the interview with A.Razzakov (born on 5.08.1948 in Andijan region), who was sent to Syria by the

organization “Glavzarubejstroy” under the Ministry of the water resources of UzSSR to work with the land development in Steppe West-Maskene. He worked in Syria from June 1985 till June 1988. (19.07.2016)