



ACTIVITY OF ENGINEERING AND HYDROTECHNICAL STAFF FROM CENTRAL FERGHANA PROVINCE AND THEIR PARTICIPATION IN IRRIGATION WORKS OF FOREIGN COUNTRIES (50-80 Years of 20th Century)

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ABSTRACT

In the article, the activities of hydraulic engineers who came from the Central Ferghana regions in the 1950s and 1980s and their participation in the irrigation works of foreign countries were analyzed with the help of scientific literature and primary sources.

KEY WORDS: *Irrigation system, Central Ferghana, irrigation personnel, Mozambique, Afghanistan, jalalabad complex.*

INTRODUCTION

It is worth noting that Uzbek irrigators have extensive experience in the construction of hydrostructures, reconstruction works, and the opening of reserves. This age-old tradition continued organically during the 1960s and 1980s of Soviet rule. It was during this period that Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (now “Tashkent Institute of Irrigation and Agricultural Mechanization Engineers” National Research University) and Andizhan cotton-growing institutes (now Andizhan Institute of Agriculture and Agro-Technology) trained personnel of hydraulic engineers and mechanizers according to international standards. For example, from the 60s of the 20th century, Uzbek engineers-hydraulic technicians with mature experience in the field of irrigation participated in the construction of hydro facilities in Mozambique, Afghanistan, and Syria, where the irrigation system was in a simple state. Among them, representatives of Central Fergana regions in Afghanistan (T. Khojiboev, A. Otaboev, Y. Rahmonov, S. Gafurov), Mozambique (U. Nizomov, D. Koldoshev) and Syria (A. Razzakov, S. Yakubbekov, D. Karimov, S.Samsakov) worked.

RESEARCH METHODS

The Ministry of Water Management of the Republic, which has mature experience in the field of irrigation construction, and the “Sredazgiprovodkhopok” project institute provided support for the construction of the Jalalabad irrigation canal on the Kabul River. The use of the canal and hydroelectric station began in 1963 [1]. About 600 Soviet specialists, including 260 representatives of Uzbekistan, participated in the construction of the Jalalabad complex here. In particular, the chief specialist was A.F. Michurin (Ferghana region), a hydraulic engineer who worked on the construction of the Big Ferghana Canal and Ortatokai reservoirs, and S. Gafurov, a hydraulic engineer (Ferghana region).

RESULTS AND DISCUSSIONS

The construction of Jalalabad highway canal and hydro facilities was carried out with the participation of specialists from the republic and Ferghana Valley. Specialists of the Ministry of Reclamation and Water Management of the Republic provided technical and advisory support to construction organizations and irrigation construction works here. For example, in 1961-1965, they took an active part in the works on irrigated fields, which were established in place of 26,000 hectares of protected land in the Jalalabad system, including 6,000 hectares using a mechanical water-producing (lifting) structure [2].

In 1964-1965, more than 74,000 ha of irrigated land was planted with cotton as a result of the participation of representatives of the valley in irrigation works in the Afghan lands. In these years, the total yield of cotton was 75 thousand tons, and the average yield was 10 tons per ha. was from [3]. In 1965, the water consumption was 50 m³/s, the Jalalabad irrigation system, which included a 70 km main irrigation channel and other hydrotechnical facilities, was built and put into permanent use



[4]. The activities carried out in cooperation, in turn, gave an opportunity to release water to 25,000 hectares of land that were previously flooded. Large mechanized state farms were built on newly opened lands. They specialized in growing citrus, olives, meat and dairy products.

It was in 1965 that such farms as “Khadda”, “Jumhuriyat”, “Batikot”, “Ghaziabad” were launched in the city of Jalalabad, the center of Nankhargar region of Afghanistan. T. Hojiboev, A. Otaboev and Y. Rahmonov from Andijan hydraulic engineers took part in the re-appropriation of existing 2,200 ha of rocky land in the “Jumhuriyat” farm and putting it into use. Olives and turnips were mainly cultivated in the occupied territories. It is worth noting that the maximum weight of cultivated turnip in this area is 5-7 kg. In addition, 31,500 hectares of land were planted with the Jalalabad irrigation system, the length of the main canal is 70 km, hydroelectric power station is included, that is, this system was of complex interest. As a result of farm development in Afghanistan, 200,000 hectares of reserves were opened, 150,000 hectares of irrigated areas were improved. Water from Amudarya, Panj, Kokcha, Kunduz rivers was used for irrigation [5]. Irrigation facility built with the participation of Uzbek-Afghan irrigators - 164 mln. in Ghazna region. Sarde is a reservoir with a volume of m^3 . His project was prepared at the “Sredazgiprovodkhlopok” institute. A modern irrigation system was built at the base of this artificial basin. In turn, the irrigation system improved the water supply of 17,600 newly opened areas, including 1,000 of existing irrigated lands. At the same time, important measures were taken to organize the regular use of irrigated areas in the main objects of the irrigation network, and more state farms were established there. Training of local specialists was also started through individual training in workplaces belonging to irrigation departments. In particular, when the construction of the Sarde reservoir on the Jilga river began, 1150 construction and agricultural workers, 569 mechanics, and 80 engineering and technical workers were trained. Trained specialists helped with the irrigation work here.

During the studied period, hydraulic engineers from Andijan region took part in the development of the West-Maskene desert in Syria, which is equal to 50,000. 26 state farms have been effective in developing this desert. Also, valley engineers took part in exploitation and development work in Mezerepane state farm located in Nampulo province of the Republic of Mozambique. A group of specialists [6] worked effectively in the construction, full operation and repair of Namioza reservoir (barrage-small reservoir) (capacity 1 million $200 m^3$) and Impiezi reservoirs (capacity 1 million m^3). With the help of Fergana Valley hydraulic engineers, the commissioning and renovation of a number of water facilities in these republics, as well as the development of rocky lands, gave impetus to the development of cotton cultivation in these areas.

However, with the development of international relations and experiences in the field of irrigation, the need for personnel in some regions of Central Ferghana became obvious. This need for personnel was also observed in the Boz region of Central Ferghana. In particular, there was a lack of specialist hydraulic technicians, engineers, and engineers in the regional water management organizations. In 1965, 64 employees worked in the district water industry, but most of them did not correspond to the positions they held, and the number of such employees was 32 people. Therefore, the regional executive committee asked the regional governing bodies to assist in sending the graduates of the hydromelioration school to Boz [7]. However, this demand was not met in time, because the demands and requests of the regional authorities were learned from the center and decided only later. It goes without saying that this process took a lot of time.

Even in the 1970-1980s, the leading bodies of the Soviet government paid great attention to the personnel training system for the middle-level sector in the republic. Because of this, their number increased. It was during the ninth five-year period (1971-1975) that 6 hydromelioration technical schools trained water management personnel. In particular, Tashkent, Samarkand, Andizhan, Urganch, Surkhondarya and Nukus hydromelioration technical schools have been operating. These educational institutions trained 8,496 specialists in hydromelioration, hydrotechnical construction, mechanization of hydromelioration works, and automatic operation of irrigation systems. It can be said that they increased every year, in short, in 1971 - 1349, in 1972 - 1558, in 1973 - 1981, in 1974 - 1790, and in 1975 - 1818 young specialists with secondary technical education were trained [8]. During this five-year period, the training of middle-level specialists was carried out mainly in the Andijan region of Central Ferghana. This educational institution plays the role of a center for the training of secondary specialists in the region. It is clear from the given data that the training of middle-level and higher-educated technical personnel related to the field of irrigation has grown in the republic, and in addition, in the Fergana Valley. However, in some areas of the republic, in particular, in Central Ferghana, the process of shortage of personnel in the field of irrigation and melioration was clearly visible. It is worth noting that the lack of specialists with diplomas (especially in newly acquired lands) was considered a serious problem. The authorities and the heads of most agricultural enterprises were not engaged in creating favorable conditions for specialists to work permanently. Young professionals who graduated from universities and technical schools and were sent to villages were not provided with enough housing, they often did not work in their specialty [9]. In terms of personnel, the only factor that led to such a situation was that only the center was empowered to appoint and dismiss heads of irrigation departments. Also, most agencies and organizations were deprived of the right to conduct independent work. They expected approval from the top of annual plans for defining and implementing agrarian and irrigation measures and were accustomed to working only on the basis of orders.



Many collective farms and state farms played an incomparable role in the development of the cotton industry in the regions of the Ferghana Valley. A number of collective farms and state farms were formed in the appropriated territories. Under the influence of Soviet agrarian practices, the number of such farms increased. These farms were filled with specialists with higher, secondary specialized education related to irrigation and agrarian fields. For example, in 1972, there were 187,800 specialists in various professions in the valley collective farms and state farms, and 7,930 of them were agronomists, zootechnicians, irrigators and other personnel. In particular, there were 1,258,000 specialists with special secondary education [10]. These specialist personnel, in turn, took part in the opening of new lands here and the creation of cotton fields in them. In 1973, the Andizhan hydromelioration technical school, which was considered a middle-level personnel training center for the Central Ferghana irrigation network, mainly trained personnel in the fields of "Hydromelioration", "Hydrotechnical construction", "Mechanization of hydromelioration works". According to the tariff notice dated April 15, 1984, 73 teachers worked in the technical school, 57 of them were full-time, 16 were part-time. Admittedly, the capital funds allocated to construction works in the field of irrigation were not fully utilized, and therefore, in most cases, these activities were stopped before completion. The reason for this is that the Soviet authorities were not aware of the natural possibilities of the valley and the development of unpromising plans for the development of the area.

CONCLUSION

In 50-80 of 20th century the issue of training specialists for the irrigation of the Ferghana Valley was a constant focus of the former government. Because irrigation works were primarily directed to the development of cotton cultivation. For this purpose, a number of activities were developed by the agencies in the field and an effort was made to implement them in the studied period. In the valley, specialists with higher education related to the system were mainly trained at the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers and Andizhan cotton-growing institutes, and middle-level personnel were mainly trained at hydromelioration technical schools and mechanization schools. In particular, since 1956, hydraulic engineers, land reclamation engineers, mechanizers have been trained in the institute in accordance with international standards, and it plays a key role, and its international reputation has been increasing year by year. In the management positions of the central Fergana irrigation system, not the representatives of the local population who well understood the natural conditions of this land, but mostly people belonging to other nationalities worked. Admittedly, during the studied period, professional and experienced hydrotechnical engineers of international standards came from the republic, including the Ferghana Valley, and they actively participated not only in the irrigation system of the valley, but also in the irrigation and development activities held in foreign countries, including the country of Mozambique.

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