

Implementation Of Water-Saving Technologies In Ferghana Valley And Its Results (1991-2018)

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Abstract: The article analyzes, using scientific sources, important measures and events being taken to modernize the irrigation system in the Ferghana Valley regions, promising tasks in the introduction of water-saving technologies under the framework of fundamental reforms aimed at applying and studying modern methods and experiences in the irrigation system.

Keywords: Ferghana Valley, "Water Resources Management in Ferghana Valley" project, transboundary rivers, water security, international water community, water infrastructure.

INTRODUCTION

On September 16, 2020 President Shavkat Mirziyoyev chaired a video session on measures for the introduction of water-saving technologies and the implementation of public-private partnership projects in water management. The situation with water scarcity in our region is becoming more and more complicated every year. Over the past 10 years, for example, the volume of water in Uzbekistan has decreased by 12 percent, and this year by 15 percent compared to last year [1]. Today, regional cooperation in the use of water resources of the Amu Darya and Syr Darya is carried out within the framework of the activities of the Interstate Coordination Commission for Water Management (ICWC), a body of the International Fund for Saving the Aral Sea (IFCAS). The members of this commission are the heads of water management bodies of five countries in the region: Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan. The organization's task is to distribute the water resources of the Amu Darya and Syr Darya, approve annual water consumption limits for each country, and the operating regime of large reservoirs.

The President pointed out that it is important to engage the scholarly community in the construction and reconstruction of irrigation and reclamation facilities. The scientists will participate in the entire process from the elaboration of pre-project documentation for facilities through to their commissioning, and provide academic and technical support for construction works. Integration of science and practice will allow for more thorough project development.

RESEARCH METHODS

"The issue of water in Central Asia is an integral part of the issue of development and security in general," said D. Chitati, a researcher at the Institute of Geopolitical Research and Applied Sciences. He believes that countries located in the upper reaches of transboundary rivers should strictly adhere to UN conventions on international waters, their main requirements, including the conditions for not harming the environment and the interests of neighboring states when using the river.

RESULTS AND DISCUSSIONS

The numerous decrees and resolutions adopted by our President to develop the sector and increase its efficiency, as well as the work being carried out on their basis, are a clear proof of our idea. For example, it should be noted that the address of the President of the Republic of Uzbekistan to the Oliy Majlis on January 24, 2020, includes a number of important areas, such as improving water management, expanding the use of energy sources. Tasks were set to save irrigation technologies in agriculture, and automate the system of water resource management and accounting. In particular, the report states: "In 2020, we will introduce water-saving technologies on 44,000 hectares of land, which is almost 4 times more than in the previous year. 300 billion soums will be allocated from the state budget for this. It is also necessary to automate the management of water facilities, water management and accounting systems. These issues should be reflected in the water management development consortium. The draft of the concession agreement shall be submitted to the Cabinet of Ministers for approval by April 1 of the current year" [2].

In addition, in the years of independence, various laws have been developed and implemented in order to develop this system and provide legal guarantees in the country. Therefore, these legal documents are also aimed at protecting irrigation facilities in the Ferghana Valley. In particular, the Law "On Water and Water Use", adopted on May 6, 1993, is devoted to the rational use of water resources. In particular, Article 111

states: "In order to meet the future water needs of the population and the economy, as well as to protect water and prevent the harmful effects of water It is necessary to implement the principles of integrated water use and protection and basin tables and other measures" [3]. It is clear that in the process of current reforms, a special program has been developed for the development of the country, which is the basis for the successful solution of socio-economic problems in order to meet the needs and requirements of future generations. The country creates conditions for maintaining a balanced natural resource base and the environment.

In the years of independence, special attention was paid to the objective and scientific study of the history of irrigation in Uzbekistan, in particular, the Fergana Valley. In particular, the five priority directions of the Strategy of Actions for the modernization and accelerated development of agriculture in the Republic of Uzbekistan for 2017-2021 include "improving the reclamation condition of irrigated lands, developing reclamation and irrigation facilities, introducing modern water- and resource-saving agrotechnologies in intensive agricultural production, and using highly productive agricultural machinery as important tasks" [4].

We need to give more examples than this article. In addition, it should be noted that ensuring the legal and effective protection of water resources as a legal basis for this work, in particular, after Uzbekistan gained independence, serious attention began to be paid to this issue. In particular, great attention was paid to developing the legal foundations of the protection of nature and water resources and improving legislative acts in this area. Two direct articles of the Constitution of the Republic of Uzbekistan are devoted to this issue. For example, Article 62 of the Constitution states: "Citizens are obliged to treat the environment with care" and Article 68 states: "Land, subsoil resources, water, flora and fauna, and other natural resources are national property, they must be used rationally and are under state protection"[5]. Accordingly, a number of laws and regulatory documents have been developed in accordance with the Constitution. In particular, the laws "On Water and Water Use" and "On Nature Protection" are aimed at protecting nature and water resources.

The effective use of water resources depends on the proper organization of the system of their effective use. By the Decree of the President of the Republic of Uzbekistan, the Ministry of Agriculture and Water Resources was entrusted with the task of implementing state management of surface water resources on the basis of the principles of basin-based management of irrigation systems and the introduction of market principles of water use at all levels.

Based on this Decree, in accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 320 dated July 21, 2003, the current administrative-territorial management of water resources was abandoned and the management was switched to the basin approach. The previous system was unable to respond to the formation and development of market relations in water use in the conditions of limited water resources and increasing demand for them from village to village. Therefore, in order to eliminate these problems, a transition was made to the basin system of water resources management. The transition to a modern, modern method of managing the water management system has paved the way for the gradual elimination of visible problems [6].

In the Ferghana Valley, the development of the irrigation and land reclamation sector in the years of independence and the strengthening of the financial support of the system have been raised to the level of state policy. In particular, in accordance with the resolution of the President of the Republic of Uzbekistan dated December 23, 2016 "On the Investment Program of the Republic of Uzbekistan for 2017", 131.49 million UZS were allocated in 2017 in the Ministry of Agriculture and Water Resources. This year, it is planned to use 198.77 million US dollars of financing and credit funds for these projects. The capital budget of US dollars (109.5%) was allocated and used. In particular, the expenditure for the development of the irrigation system consisted of the following stages. With the support of the World Bank, which has international capabilities and capabilities, the second stage of the "Water Resources Management in the Ferghana Valley" project was implemented on September 16, 2015. A number of important measures have been taken to modernize the irrigation system and reconstruct irrigation facilities in the countries of independence.

The reforms being implemented include ensuring the effectiveness of water resources management in the Ferghana Valley, expanding and strengthening international relations in the field of water resources

management, and timely and high-quality development and implementation of a water resources management consortium for 2020-2030. Promising projects in the water sector. Work on the construction, reconstruction and modernization of water facilities will be carried out in stages in the future, expanding the attraction of investments, loans and grants. However, despite this, the water management system does not sufficiently meet the requirements of a market economy, both in terms of quality and organization. Therefore, special attention is paid to the scientific study of the water management system in the context of the transition to a market economy, and to increasing the efficiency of maintaining market principles in water management organizations.

Our President Shavkat Mirziyoyev, speaking at the 78th session of the UN General Assembly, said: "Over the past 30 years, the air temperature in our region has increased by one and a half degrees. This is twice the average global warming. As a result, almost a third of the total area of glaciers has melted. If this trend continues, the flow of the two largest rivers in our region - the Amu Darya and Syrdarya - may decrease by 15 percent in the next twenty years. The level of water supply per capita is expected to decrease by 25 percent, and the yield of agricultural crops by 40 percent. If we do not take effective measures in a timely manner, the consequences of the problems seriously affect the socio-economic stability of our region" [7], drawing the attention of the international community to a number of initiatives aimed at water scarcity.

As a solution to this problem, our President emphasized the need to use the mechanism of the "United Nations - Water Resources" in the process of developing a platform for water-saving technologies in Central Asia, and to support the attraction and implementation of the most advanced technologies.

In particular, the Concept of the Development of Water Resources of the Republic of Uzbekistan for 2020-2030, approved by the Decree of the President of the Republic of Uzbekistan No. PD-6024 dated July 10, 2020, sets the task of increasing the area of water-saving irrigation technologies in the region to 154.6 thousand hectares by 2030. In accordance with this decree, promising tasks are planned for the development of the water sector in the Ferghana region in 2022-2026, including the introduction of water-saving technologies on a total area of 125.5 thousand hectares in 2022-2026. As a result, projects have been identified that provide for the provision of incentives for the purchase of raw materials (granules) by organizing separate stock exchanges for local enterprises producing drip irrigation equipment in our Republic, extending the period of exemption from customs duties on imported raw materials (granules), increasing the customs duty on the import of components of drip irrigation technologies produced in Uzbekistan from abroad to 20 percent, supporting and developing local manufacturers, and allocating additional credit resources for commercial banks and ensuring full financing of applicants.

CONCLUSION

In conclusion, after the Republic of Uzbekistan gained independence, fundamental reforms were carried out in its irrigation system, as in all other sectors, which entailed huge fundamental changes. Much attention was paid to the application and study of modern methods and experiences in the field of land reclamation, since the goal was to maintain agriculture through proper irrigation. In general, significant measures are being taken to modernize the irrigation system in the Ferghana Valley. A large amount of money has been spent on modernizing the system, and this indicator is growing from year to year. As a result, the provision of irrigation and land reclamation zones with modern equipment is increasing every year. In the years of independence, a number of practical measures have been developed to improve the water supply of cultivated lands in the valley, rational use of land and water resources, development of the sector, and increase the productivity of agricultural crops.

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