FACTORS LEADING TO DRINKING WATER SHORTAGE AND DROUGHT IN UZBEKISTAN

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Abstract. In this article, we describe the global water shortage in the Republic of Uzbekistan and the countries of the world, the importance of water, which is an integral part of human life, as well as the protection and effective use of water resources, the causes and effective solutions to this process.

Kalit so'zlar: Muhit , ichimlik suvi, artizan, ekin maydonlari , suv, suvni qayta ishlash,tejamkorlik, Yer osti suvlari,daryolar.

Key words: Environment, drinking water, handicrafts, arable land, water, water treatment, economy, underground water, rivers.

Ключевые слова: Окружающая среда, питьевая вода, ремесленничество, пашня, вода, водоочистка, хозяйство, подземные воды, реки.

INTRODUCTION. Water is the most important source of life for every living thing on earth. It is not for nothing that our wise people say that earth is a treasure and water is a gem. Both land and water provide people with food products, treats, and preserve health. That is why our nation has always paid serious attention to the wise use of water resources and its preservation.

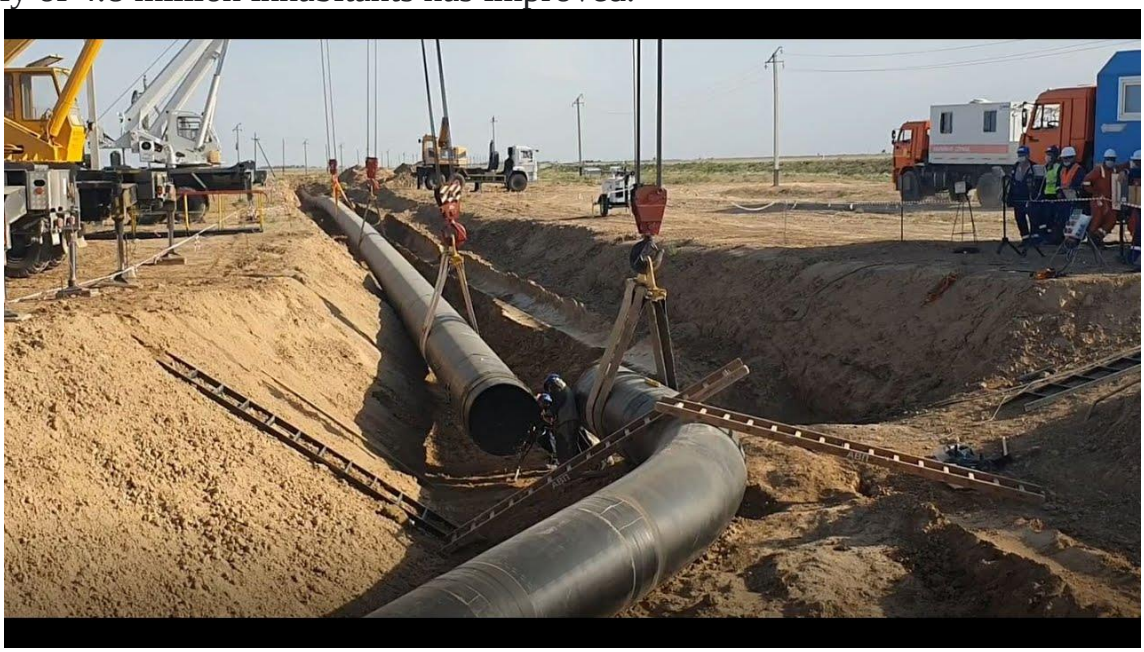
Developing sustainable practices for efficient water use and distribution is critical to the future economic and social development of all countries. Especially for countries located in difficult climatic conditions, the issue of saving water has always been of urgent importance. In order to save and use water without wasting it, many scientific

and practical works are being carried out in our country. Today, countries are making maximum use of almost all of their available resources. Looking back, the demand for water has doubled since the 1960s. This was influenced by the increase in population, the development of agriculture and industry. In the future, the Middle East and North Africa will be the first to face shortages of this vital resource, which could eventually lead to conflict and negatively affect the industry. At the moment, the water problem in North America and Europe is relatively stable. But this does not mean that these areas are safe. For example, 6 states of the USA have very high water scarcity. Rising demand and rapid climate change could also lead to a decline in the GDP of India and China.

Global food security is also threatened by water depletion. Currently, 60% of irrigated areas in the world are drying up. Especially farms engaged in the cultivation of sugarcane, wheat, rice, and corn. Experts offer a number of solutions to this problem. These include the conservation of wetlands and forests, the introduction of more efficient irrigation methods by farmers, and the use of renewable energy sources. Singapore and the American cities of Las Vegas have already managed to prove that it is possible to thrive in the face of water scarcity. This was achieved by treating and reusing wastewater. However, not all countries can do this. The world's demand for fresh water has never been higher.

According to Uzbek experts, in the last 6 years, about 14.5 trillion soums have been allocated to improve the drinking water supply of the population in our country. 1,176 water facilities and 20,800 kilometers of drinking water networks were constructed from these funds.

"Five-six years ago, the population was supplied with centralized drinking water by 60 percent," says Akmal Murodov, press secretary of Ozsuvtaminot JSC. — As of January 1 of this year, this indicator is 74.4 percent. During this period, 8.2 million people were provided with centralized drinking water for the first time. Drinking water supply of 4.8 million inhabitants has improved.



Are we getting the value of water?

So what about us? Are we getting the value of water? We know that water is a matter of life and death for us, but we do not want to spend it properly. Now, if you enter many houses, you will notice that water is leaking like a needle from hoses lying on the ground, from artesian taps. We do not even imagine that the volume of water leaking from this faucet will reach 840 liters per day. Now multiply this figure by 30 days. It means that 25,200 liters of water is being wasted.

Water shortage is also increasing in Uzbekistan. According to the forecasts of the United Nations, by 2030 the shortage of water resources on our planet may reach 40%. In Uzbekistan, water supply per capita has halved in the last 15 years as a result of a significant increase in water scarcity.

One of the biggest natural disasters of our time is the drying up of the Aral Sea. The scale of the tragedy is not even regional, but global in nature. In Uzbekistan, great efforts are being made at the national level to combat the negative effects of the Aral Sea construction on the environment and public health. In this article, you will read analyzes of water use in Uzbekistan and the region, inefficient irrigation in agriculture, drinking water supply problems.

Taking this into account, the use of water resources in our country has been fundamentally reformed in recent years. The main issue is the rational and efficient use of water, aimed at improving the amelioration of irrigated lands. Therefore, in the pre-election program of the President, special attention was paid to saving water resources, and by 2030, all cultivated areas under irrigation in our republic should be transferred to water-saving technologies. and it was determined that measures will be taken to further increase incentive mechanisms for farmers.

In particular, a total of 1.2 million in 2017-2023. water-saving technologies were introduced in 1 hectare, i.e., in about 31% of agricultural arable land. It includes technologies such as drip, sprinkler, discrete irrigation, flexible pipe, film irrigation, during these years 630 thousand hectares of land were laser leveled. Another important recognition is that Uzbekistan ranks first in Central Asia, second among the CIS countries, fourth in Asia and 13th in the world in terms of introducing water-saving technologies. It can be said that it is the result of effective implementation of measures aimed at further reforming the system.

Currently, in order to further accelerate the reforms in this direction, the Ministry of Water Management has been assigned important tasks. One of them is the complete coverage of irrigated cropland with water-saving technologies by 2030. It should be said that the economy of our country is based on agriculture, and a large part of the population of our region is engaged in this. Therefore, reducing the water consumption in agriculture by one percent makes it possible to save millions of tons of water and direct it to the needs of the population.

Another global issue today is the Aral Sea. The Aral Sea receives water mainly from Amudarya and Syrdarya. In recent years, Syrdarya water has been used to fill reservoirs and for irrigation, so it has not reached the Aral Sea. Reservoirs were built on Amudarya and its tributaries, and a large amount of water began to flow through canals to cultivated fields. As a result, Zarafshan, Surkhandarya and Kashkadarya did not reach Amudarya. Currently, the total length of canals receiving water from Amudarya has exceeded 170,000 km, and the number of reservoirs has exceeded 50. Their water capacity is 16-17 billion cubic kilometers.

Improper use of water resources - in the areas of the upper and middle reaches of the Amudarya, the rise of flood waters led to an increase in soil moisture evaporation and, as a result, an increase in soil salinity. In the areas along the island, the surface of the flood waters decreased, and the surface of the land began to be covered with saline soil. Currently, the remaining water in the Aral Sea is unsuitable for agricultural use.

Shavkat Mirziyoyev also touched upon the issue of water at the meeting held in Termiz city on the socio-economic development of Surkhandarya region.

At the meeting, the President noted that the flow of Amudarya and Syrdarya is expected to decrease by 15 percent in the next twenty years. He noted that water-saving technologies are expanding, but this is not enough. In particular, our president emphasized such a diya. "The main task should be to inculcate the idea that "water is not free" in the population, to make it a rule of daily life together with neighborhood activists, intellectuals, intellectuals and the general public."

Also, half of the 1,700-kilometer irrigation network is covered with soil, so 35 percent of water is lost. Therefore, the head of state tasked the officials with the task of developing a two-year program for concreting 47 canals and repairing 6 canals with a lot of water loss.

In addition, in 2024, he attracted 60 million dollars for the repair of the "Sherabad highway" canal and commissioned the restoration of 90,000 hectares of land. For two years, about 2 billion dollars ($2, 54 billion (excluding public debt) has been allocated, but during this time the condition of water wastage and pumps has not improved. In 2024, another 1.7 trillion soums and 300 million dollars of loans are planned to be allocated to the industry.

During the year, 39 billion cubic meters of water were consumed in agriculture in the country.

Of this, 36 percent or 14 billion cubic meters of soil was lost in canals and ditches. Another 5-6 billion cubic meters of water is lost due to outdated irrigation methods.

Today, more than 5,000 pumps are used to irrigate 2.5 million hectares, and 7 billion kilowatt-hours of electricity are consumed annually. But 80 percent of the pumps have been used for 35-40 years and have passed their useful life.

Despite the funds allocated in 2020, more than 60 percent of the pumps have reached the end of their service life, and water losses are 35-40 percent, which means that instead of modernizing the pumps and reducing the losses for three years, the situation is even worse. it is noteworthy that it has become heavier.

At the meeting held in Termiz in 2021, the head of our state specifically addressed the problem of drinking water in Surkhandarya region. At that time, the level of drinking water supply through centralized networks in the region was around 60 percent. In this regard, the President noted that the "Topalang" water reservoir is a huge and clean source, and set the task of preparing a project to bring it to the population.

In fact, water is collected in this basin from the melting of snow and ice in the mountains. According to the tests, the hardness of this water is 4%, it is rich in useful minerals and it is pure. Using this, an important social project is being implemented for the residents of Surkhandarya. As part of the project, 380 kilometers of metal pipes will be laid from the reservoir to the city of Termiz. 159 kilometers of it are highways, 221 kilometers are internal networks connecting cities and districts. Also, water treatment, pressure reduction and water collection facilities will be built. Today, 147 kilometers of pipelines have been laid. Water purification, pressure reduction and five water collection facilities were built.

The launching ceremony of the first stage of this project was held in Bogistan neighborhood of Saryosi district. President Shavkat Mirziyoyev pressed the symbolic button and opened the way of "bi life". At this stage, the water reached Sariosia, Denov, Shorchi and Kumkurgan districts. The level of provision of centralized drinking water to the population of the region has reached 70%. Another important point is that 8.6 million kilowatt hours of electricity will be saved due to the flow of water.

In the second stage of the project, the level of centralized drinking water supply will reach 90%. About 2 million residents of Sariosia, Denov, Shorchi, Kumkurgan, Zharkurgan, Bandikhon, Kyziriq, Sherabad, Angor, Muzrabot, Termiz districts and Termiz city will benefit from this. The project is scheduled to be completed in 2024.

In conclusion, water shortage is a global problem. In such conditions, implementation of important measures related to the rational use of water resources in Uzbekistan as well as in many countries of the world. After all, the widespread introduction of water-saving technologies not only allows reducing water consumption, but also becomes an important element of the transition to a green economy. This, in turn, guarantees the stable development of Uzbekistan.

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