

FEATURES OF THE INTRODUCTION OF WATER-SAVING TECHNOLOGIES IN THE REPUBLIC OF UZBEKISTAN

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ANNOTATON

The article analyzes the theoretical and practical issues of the introduction of water-saving technologies in the Republic of Uzbekistan, types of water-saving technologies, the organizational and legal basis for the effective use of water resources, the necessary measures for the careful use and management of water resources.

Key words: water resources, water saving technologies, lack of water, clean drinking water.

Water is life! The main source of the existence of life on Earth is water. It is known that humanity, the flora and fauna, in general, no creature can live without water. Although two-thirds of the globe is covered with water, 97.5 percent of it is salt water and is unsuitable for use. The remaining 2.5 percent accounted for freshwater resources, 79 percent of which accounted for eternal glaciers, 20 percent for groundwater, and 1 percent for River and Lake contributions¹. Almost all fresh water is stored in the form of ice cover and groundwater in Arctic climates such as Antarctica and Greenland². According to UNESCO data recorded in 2003, the first place in terms of clean drinking water is occupied by Finland, followed by Canada and New Zealand³.

In Eastern philosophy, including the works of alloma al-Farabi, the holiness of the four elements of being – soil, air, water and fire is emphasized⁴. After all, honoring water means preserving the future.

According to Article 50 of the Constitution of the Republic of Uzbekistan, citizens are obliged to carefully treat the natural environment⁵.

A person consumes an average of 75 tons of water throughout his life. 82% of the body of an adult person, 97.5% of the embryo at six weeks of age, the main part of the body of a newborn is water. An adult consumes 2.5 liters of water per night, of which 1.2 liters per drinking water, 1 liter is consumed through water contained in various food products, fruits and vegetables, 0.3 liters appear in the body during the process of substance exchange⁶.

According to data, 4 out of 10 people in the world population live in areas that lack clean drinking water. UN experts predict that by 2030 the population of the globe will reach 8.6 billion, and in 2050-9.8 billion. Naturally, as humanity grows, the demand for water increases.

¹ <https://water.gov.uz/public/files/1/5f48e327b7732.pdf>

² <https://www.thesisat.org/su-tasarrufu-yapmanin-yollari.html>

³ <https://hidoyat.uz/49451>

⁴ <https://saviya.uz/hayot/tarjimai-hol/abu-nasr-forobiy-873-950/?imlo=k#>

⁵ <https://lex.uz/docs/20596>

⁶ <https://soglom.uz/archives/952>

The importance of water for Uzbekistan, which is located in an arid region, far from the oceans and large seas, is great. About 80% of the water resources used in our country (about 41.5 km³ /year) are formed at the expense of glaciers in the territory of neighboring Republics. Due to Global climate changes, 30 percent of the existing area of more than 8 thousand glaciers in Tajikistan, and about 10 thousand percent of the area of glaciers in Kyrgyzstan have melted. It is predicted that by 2030 another 15-20 percent of glaciers will disappear⁷.

Clean drinking water is one of the most necessary conditions for humanity to see the day on planet earth. Although water is a renewable resource, the number of regions where the problem of water scarcity has arisen due to the increasing population of the world is also increasing year after year.

Science News reports that 2 billion people from 7.6 billion inhabitants of the Earth need clean drinking water⁸. According to the UN report, if this continues, by 2050, half of the planet's population will not be able to consume the pure drinking water that a person needs. This is caused by two main factors: population growth and climate change. The countries with the highest water scarcity on earth are: India, Ethiopia, Nigeria, China, Democratic Republic of the Congo, Indonesia, Tanzania, Uganda, Pakistan, Kenya, among others⁹.

As a result of research work carried out by some scientists, specialists and engineers from around the world in the field of water use, it has been proven that the mechanism for reducing water scarcity is divided into three:

1. Reducing water resource consumption;
2. Attracting investment projects for the additional use of groundwater;
3. Targeted water use, rethinking the distribution of Water Resources¹⁰.

According to Countrysmetres, the annual population growth rate on the planet in 2020 is 95 million. For comparison, in 2015 this figure was equal to 83 million people. It should be noted that during the period when the population of the land increased by 3 times, the volume of fresh water use increased by 17 times. On-ustak, according to some forecasts, after 20 years, the volume of demand for fresh water may increase by another 3 times.

The problem of lack of fresh water is no stranger to Uzbekistan either. Uzbekistan ranks 25th in the list of countries with water shortage problems. The level of water scarcity in the country is assessed as high.

On September 16, 2020, at a video projector meeting under the leadership of President Shavkat Mirziyoyev, the issue of introducing water-saving technologies was discussed. It is noted that over the past 10 years, water reserves in Uzbekistan have decreased by 12%, and this year by 15% compared with last year¹¹.

The Republic of Uzbekistan is located in the Aral Sea basin, the main source of water is the Amudarya and Syrdarya rivers, as well as inland rivers and streams, as well as groundwater. It is known that an average of 52 billion m³ of water is used in our republic in a year, of which

⁷ <https://water.gov.uz/public/files/1/5f48e327b7732.pdf>

⁸ <https://www.sciencenews.org/>

⁹ <https://news.rambler.ru/other/40629845-ostryy-defitsit-pitevoy-vody-top-10-stran-mira/>

¹⁰ <https://panor.ru/articles/mirovoy-opyt-upravleniya-vodnymi-resursami-innovatsiya-vodoobespecheniya-i-vodosberezheniya/13957.html>

¹¹ <https://kun.uz/news/2020/09/19/suvni-qanday-tejash-mumkin.>

80 percent falls on the contribution of the trenschegard rivers and is formed due to the melting of glaciers and snow on the territory of neighboring countries. 90 percent of the water that our Republic receives is used in the agricultural sector. However, as a result of global climate change and anthropogenic impacts, which have been evident in recent years, there has been a decrease in the water level of Amudarya and Syrdarya, considered the main rivers of Central Asia, as a result of the decrease in the area of glaciers in the Highlands. In conditions of shortage of Water Resources suitable for freshwater and agriculture, the demand for water is growing even more in the conditions of growth of the population and rapid development of the economy in the Amudarya and Syrdarya basin countries, including Uzbekistan. It would seem that the effective and economical use of Water Resources in agriculture in these conditions is relevant, especially if the introduction of water-saving technologies in crop irrigation¹².

On February 24, 2021, President of the Republic of Uzbekistan Shavkat Mirziyoyev, it was said that the water supply in the 2021 irrigation season is expected to be 25 percent less. Therefore, it was noted that by introducing water-saving technologies in 430 thousand hectares, it is necessary to save 3 billion cubic meters of water .

In particular, the decree of the President of the Republic of Uzbekistan dated December 11, 2020 №. 4919 "On measures to more intensively organize the introduction of water-saving technologies in agriculture"determined the tasks of dramatically increasing the efficiency of water use in agriculture in the conditions of increasing water shortage and growing demand for Water Resources, and in 2021, drip irrigation on, The task is set to introduce discrete irrigation technology in areas where 2 thousand hectares of vegetables and melons and 2 thousand hectares of fodder crops are grown, rain and irrigation, and 623 hectares of cotton are grown.

On may 6, 1993, the law of the Republic of Uzbekistan №. 837-XII "On the use of water and water" was adopted. This law consists of 29 chapters, 119 articles, and the purpose of this law is to regulate water relations. The main tasks of this law are to ensure the rational use of water for the needs of the population and sectors of the economy, to protect water from pollution, pollution and depletion, to prevent and eliminate the harmful effects of water, to improve the condition of water bodies, as well as to protect the rights and legitimate interests of enterprises, institutions, organizations, farms, Article 2¹ of the law provides basic concepts such as groundwater, surface water, reclamation objects waters, water consumption (water consumption), Association of water consumers, Water consumer, water object, water object protection, water regime, Water Resources, Water Management, Water Management object, water use, harmful effects of water users and Waters, cross-border water objects and cross-border waters.

President of the Republic of Uzbekistan "On organizational measures to radically improve the system of Public Administration of Agriculture and Water Resources»¹³ according to the Decree №. 5330 dated February 12, 2018, the Ministry of Agriculture and the Ministry of water resources of the Republic of Uzbekistan were established on the basis of the Ministry of Agriculture and water resources of the Republic of Uzbekistan. Decree of the president of the Republic of Uzbekistan №. 3672 of April 17, 2018 "On the organization of activities of the

¹² <https://water.gov.uz/public/files/1/5f48e327b7732.pdf>

¹³ <https://lex.uz/uz/docs/3586971>

Ministry of water resources of the Republic of Uzbekistan"¹⁴ according to him, the organizational structure of the Ministry of Water Resources, the limited number of management personnel, the Ministry of water resources of the Republic of Karakalpakstan, the basin departments of irrigation systems of the regions, the structures of operational organizations in the system and the limited number of management personnel were approved. In accordance with the resolution of the Cabinet of ministers №. 500 of July 3, 2018 "On approval of regulatory legal acts regulating the activities of the Ministry of water resources of the Republic of Uzbekistan", the regulation on the Ministry of water resources of the Republic of Uzbekistan was approved and the main activities and tasks of the ministry were determined. In particular, in accordance with this decision, the implementation of a single policy in the field of Water Resource Management, the formation of water accounting, reporting and balance sheet, as well as the Coordination of the activities of state bodies and other organizations in the field of Rational Use and protection of Water Resources, prevention and elimination of harmful effects of water;

creation of conditions for meeting the ever-increasing needs of the population, sectors of the economy and the environment for water, ensuring the effective use of Water Resources;

the main tasks of the ministry are the modernization, development and high-quality organization of construction works, development of legislative acts, as well as the involvement of qualified foreign experts and consulting organizations in the design and examination of Water Resources with a high level of security, etc.

According to the decree of the President of the Republic of Uzbekistan dated October 9, 2019 №. 4486 "on measures to further improve the Water Resources Management and the use of Water Resources in our country, to ensure the effectiveness of the implementation of irrigation and land reclamation projects, to introduce market principles and mechanisms in the field of water management, as well as to.

Decree of the President of the Republic of Uzbekistan dated February 24, 2021 №. 5005 "on approval of the strategy of Water Resources Management and irrigation sector development in the Republic of Uzbekistan for 2021 – 2023"¹⁵ signed.

The strategy includes a number of infrastructural, political, institutional and capacity development measures that cover the sustainable management of the country's Water Resources and the improvement of the irrigation sector.

Within its framework, the following are provided:

irrigation system channels concrete pavement section increased from 35 to 38 percent, irrigation system and irrigation networks increased useful work rate from 0.63 to 0.66;

the reduction of irrigated areas with low water supply levels from 526 thousand hectares to 424 thousand hectares;

the introduction of water-saving irrigation technologies will increase from 308 thousand hectares to 1.1 million hectares, including drip irrigation technology from 121 thousand hectares to 822 thousand hectares;

¹⁴ <https://lex.uz/docs/3687875>

¹⁵ <https://lex.uz/docs/5307918>

the reduction of saline areas from 1,926,000 hectares to 1,888,000 hectares, including moderately and strongly saline lands from 581,000 hectares to 532,000 hectares;

re-use of a total of 232,000 hectares of irrigated land left out of use in agriculture;

Transfer of 60 large water management facilities to automated management based on digital technologies;

monitoring of the calculation of electricity consumption and water consumption of 5 231 pump units at 1688 pumping stations in the system of the Ministry of Water Resources is carried out online;

the implementation of a total of 124 projects on the basis of the PPP principles in water management, the cost of supplying water for irrigation is covered by 9% of water consumers.

In conclusion, it should be noted that saving, distributing water and maintaining the purity of drinking water is a universal problem. **Water is inextricably linked with human life, health,**

That is why our people have long considered the water sacred and preserved the springs and Wells. Preserving the nature and rich natural resources of Uzbekistan should be our main goal

and task to ensure their rational use in the interests of current and future generations, to preserve environmental safety, especially the health of the nation and to ensure the health of the gene pool, to ensure the sustainable development of the country. Water must be used

rationally and it must be protected by the state.

Based on the above, the following are offered:

1. In order to manage water resources and save water, ensure the rational use of water for the needs of the population and sectors of the economy, save water from pollution and depletion, prevent and eliminate harmful effects on water resources, improve the condition of water bodies, enterprises, institutions, organizations, farms, peasant farms and citizens must strictly comply with the requirements of the current legislation.

2. It should be organized by the Ministry of water resources to constantly conduct propaganda and propaganda work through the media in order to save water among the population.

3. It is necessary to accelerate educational work in schools and colleges, starting from kindergarten, in order to preserve water as sacred by the population and to raise the culture of water conservation, and to avoid situations of wasted water leakage by citizens in enterprises, institutions, organizations, farms, peasant farms, apartments, country yards and other places.

4. Article 60 of the code of administrative responsibility of the Republic of Uzbekistan (violation of ownership of Natural Resources), Article 72 (violation of Water Resources Protection Rules), Article 74 (violation of water use and water consumption rules, Article 75 (violation of the rules for maintaining state records of waters) and Article 76 (damage to water resources and devices, violation of the rules.

5. In the future, it is worthwhile to introduce innovative technologies in the field of robust Water Resources Management and water conservation.

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