Meliboyeva F.S.
Abdinazarova X.O.
Otajonova F.K.
Kokand State Pedagogical Institute

FERGANA VALLEY WATER RESOURCES AND THEIR IMPORTANCE IN THE NATIONAL ECONOMY

Abstract. The article describes the formation of water resources of the Fergana Valley and their effective use, the location of underground water, the problem of fresh water and its elimination.

Key words: water resources, fresh water problem, rivers, channel, reservoir, groundwater.

Nature protection is a system of state, public and international measures to ensure the rational use of natural resources, their restoration, reproduction and protection from extinction. Nature protection is of great economic and social importance for the national economy of each country, it is carried out for production, scientific, historical-memorial, cultural and health purposes.

The Fergana Valley has long been a fertile oasis, known as the "Golden Valley" for its natural climate and fertile lands. The valley is the most densely populated region in Uzbekistan and Central Asia.

The rivers and streams in the valley are also its important natural resources. In order to make efficient use of these natural resources in the valley, Northern Fergana (133 km long, irrigated area 70 thousand), Southern Fergana (93 km long, irrigated area 71 thousand), Greater Fergana (249 km long, irrigated area 270 thousand), Greater Andijan (length 109 km of main canals, such as 141,000 hectares of irrigated land, and Fergana (216.5 million m3 of water in Quvasoy) and Kosonsoy (160 million m3 of Kosonsoy) reservoirs have been built.

In order to make more efficient use of water resources, the Andijan reservoir was built in the Kampirrovot gorge of the Karadarya River, and the Zarkat reservoir was built in the Poshshaota river. The valley has healing and mineral waters such as Chartak, Chimgan, Southern Olamushuk, Polvontash, Shirmonbulak, and sanatoriums and medical facilities have been built for its use.

Today, one of the biggest concerns of humanity is the fact that the volume of fresh water consumption in the world is increasing year by year and resulting in water shortages. Even the fact that the United Nations has declared 2003 the International Year of Clean Water indicates that the environmental situation is deteriorating. But despite this, the problem of fresh water is becoming more and more entrenched.

According to the United Nations Environment Program, half of the world's rivers are now heavily polluted. About 40 percent of the world's population suffers from a lack of clean drinking water. Due to the shortage of clean drinking water, 1.2 mln. A person suffers from various diseases, 5 mln. and one is forced to consume contaminated and poor quality water.

A lot of work is being done in our country to solve the problem of fresh water. In particular, on May 6, 2003, Uzbekistan was one of the first CIS countries to adopt the Law "On Water and the Right Use of Water." In addition, 11 resolutions of the Cabinet of Ministers were adopted to protect 8 rivers flowing through the territory of the country - Kashkadarya, Chirchik, Surkhandarya, Zarafshan, Karadarya, Naryn, Amudarya and Syrdarya, as well as 11 areas of national importance.

Fresh groundwater resources in Uzbekistan are mainly concentrated in the Fergana Valley (34.5%), Tashkent region (25.7%), Samarkand region (18%), Surkhandarya region (9%) and Kashkadarya region (5.5%). Other provinces have only about 7% of the total freshwater resources.

If we pay attention to the above figures, all parts of the country are not without the problem of drinking water. As a result of the work of scientists, it became clear that as a result of anthropogenic factors, 35-38% of previously identified fresh groundwater resources have become unfit for drinking, and therefore the process has not yet stopped. Sokh water resources in Fergana region are in decline.

According to the data, a person uses 50 liters of water per day to meet his daily needs. 70-90% of fresh water resources in developing countries are used for agricultural production. It follows that at a time when there is a shortage of clean drinking water, a large part of fresh groundwater is used for production and technical purposes, irrigation.

The river water that flows in the valleys of the valley is relatively clean and almost unpolluted. However, as it continues to flow downwards, the quality of the water deteriorates sharply. The main sources of surface water pollution in the regions are mining, industries, automobiles, utilities, recreation and medical facilities.

Investigations show that there is a very large groundwater basin in the valley, which is layered between different rocks (especially sand, gravel, conglomerates of the anthropogenic period). These aquifers are located at depths of a few meters to 100-150 m, sometimes up to 300-350 m and even 450-500 m, depending on the relief of the valley, the thickness of the water-bearing rocks. Good quality water is now being extracted from depths of 500-600 m.

Central Fergana in particular is very rich in groundwater and has strong pressure. Therefore, if it is drilled, it can explode on its own. That is why more than 400 artesian wells have been dug here. According to hydrogeologists, the dynamic reserves of groundwater in the Fergana Valley are large, 257 m3 per second. But so far only 13.0 m3 per second is used.

Hot mineral waters come from the depths of 1500-3000 m in the Fergana Valley: Chartak, Chust, Gurtepa, Kyzyltepa. The temperature of thermal groundwater here reaches 40-75 ° C. The amount of minerals is very large (varied). Contains iodine, bromine, sulfide, radon and other substances. This allows the valley's groundwater to be used not only for irrigation, urban and working settlements, villages, communal water supply, but also for treatment (Chartak resort).

The diversity of the irrigation system in the valley is a distinctive feature of this area. Many large and small systems cross the connecting channels. They are used to supply water to the low-water systems of Naryn, Karadarya and Syrdarya. The efficiency of the irrigation network is low: more than 57% of main and inter-farm canals and almost (90%) of all inter-farm water networks are in need of reconstruction and maintenance.

Currently, about 53 percent of irrigated land suffers from double salinization. Therefore, 1 million hectares are classified as medium and strongly saline area. About 0.8 million hectares of land were eroded as a result of irrigation and more than 2.3 million hectares were destroyed by wind.

According to the Ministry of Agriculture and Water Resources of Uzbekistan, the shortage of water supply in the summer in Namangan region alone is 0.9 km3. In a year when water is averaged, water shortages range from 57-61 percent (June-August) to 85 percent (September). The flow of the Naryn River in the autumn-winter period is 2 times higher than the natural index, and in the summer months it is 1.9 times lower. Lack of balance in water supply continues to affect the use of canals and structures. This is causing them to retire early.

It is not in vain that our wise people say, "The water that flows before you is worthless." Planting land-adapted plants in small gardens and flower beds in the yard, the use of drip irrigation will solve the problem, albeit partially. Unfortunately, the work being done today to save water and keep it clean is like a drop in the ocean. Unless all of humanity strives to conserve water, which is a matter of life and death, and instills in the minds of their children the concepts of ecological culture in the family from the day they are born, humanity will soon face a problem worse than the use of nuclear weapons. So, we must not forget that not only our own lives, but also the lives of future generations are in our hands.

References:

1. Мелибоева, Феруза Солижоновна, and Ғайратжон Хасанбоевич Бердиев. "СУВ ТАҚЧИЛЛИГИДА СУҒОРИШ УЧУН ОҚАВА СУВИДАН ФОЙЛАНИШ ИМКОНИЯТЛАРИНИ БАХОЛАШ." *Интернаука* 10-4 (2017): 31-34.
2. Бердиев, Ғайратжон Хасанбоевич, and Феруза Солижоновна Мелибоева. "СУВ РЕСУРСЛАРИДАН ФОЙДАЛАНИШНИНГ ТРАНСЧЕГАРАВИЙ МУАММОЛАРИ." *Интернаука* 10-4 (2017): 29-31.
3. Расулов А.Р., Ҳикматов Ф.Ҳ., Айтбоев Д.П. “Гидрология асослари” Т., 2003 й.

4. Қаюмов А.А., ЯкубовЎ.Ш., РаҳимовА.К. “Табиатдан фойдаланиш ва уни муҳофаза қилиш” Т., 2011 й.