

Water resources of Bukhara region and their geographical study

Y.Q. Hayitov

Professor of the Department of Ecology and geography of Bukhara State University

U.Badalov

Master's degree of the Department of Ecology and geography

Annotation: the article provides an overview of the Natural Resources of Bukhara region, especially the sources of Water Resources, their study, published scientific sources.

Key words: P.Baratov, A.R.Muhammadzhanov, I.SH.Allayarov B.Rakhmatov, M.Tagiev, G.A.Talipov, X.R.Toshov, O.H.Rahimov, G.I.Hikmatova, Hayitov Yo.Q., Water Resources, sea water, Modern (saltwater) lake, Karakir, Ayakitma, Khadich Lake, Devxona Lake, zikri Lake, Amu-Buxoro machine channel, ground water, trench water, atmospheric precipitation.

The study of the nature of Bukhara region, the emergence and settlement of Natural Resources, the comprehensive assessment of the resource opportunities of different regions, zoning and mapping are directly part of the actual tasks of geography science. In particular, the issue of the study of Water Resources is more important[1].

The oases, economic and social systems and water supply of the population built in Bukhara region are mainly met from the account of water sources coming from other regions. Therefore, the problem of drinking and irrigation water in our republic today is one of the tasks at the level of state policy. In particular, this problem is a very important issue for the Bukhara region, which is located in the central desert zone of our country and occupies an area of nine percent of its territory. The supply of drinking and irrigation water in the region is fully provided with Amudarya water through the AMU-Bukhoro machine channel. This water is supplied to the above land by means of sequentially located pumping stations and is economically expensive [2]. Under these conditions, the demand for water also increases from year to year. And the options for obtaining water from the amuderia are becoming more and more complicated.

One of the strategic ways to solve these problems is the effective use of these natural resources. So the first task is to analyze the water resources of Bukhara region and their geographical study.

Since ancient times, the Zarafshan River served as the main source of water for the region. Since the middle of the XIX century, it was difficult for the river water to flow into the Bukhara and Karakol oases. By the 60-ies of the XX century, due to an increase in the scale of production in the regions of the upper and middle reaches of the Zarafshan River, an increase in the population, the river water did not reach the lower reaches in the spring and summer months. As a result, the yield of crops decreased, adversely affected the economic activity of the population. Of course, our ancestors recovered from the sardines, pools and Wells, softening the problem of drinking water for themselves a little. But the water supply of fertile lands remained complicated. Those who have always dreamed that there will be a source of water that will provide their crops with important water. In our people who have suffered from water shortages for such centuries, the qualities of preserving, honoring, not wasting water have been polished. Already his perfume is enjoyable for humans. Consequently all of them will learn, will receive praise. Of course, today this inspirational "fountain" encourages our compatriots to give thanks to all the blessings, or rather to avoid extravagance.

Bukhara Region Water Resources can be conditionally divided into 4 parts.

1. Amu-Buxoro machine Channel 2. Groundwater 3. Factory waters 4. Atmospheric precipitation.

The main water source of the region is primarily the AMU-Buxoro machine channel (1965), I-respectively 60,3 m³/s, II - respectively 95,8 m³/s, and Amu-Karakul canal 48 m³/s. Water transfer capacity of all three channels is 204,1 m³ / h.

On the floor of the Bukhara region there is a large reserve of groundwater. They are sizot and layered water reserves.

Seven Lakes were formed in the territory of Bukhara region as a result of the meeting of zakh waters formed as a result of salt washing through the system of trenches. These are: Sea-Water Area 35 thousand/ha, water volume 1,8-2,0 billion / m³, Lake modern or Tuzkan - area 8,2 thousand/ha, total amount of water 250-300 million / m³. Karakir-27 thousand / ha, water volume 150-200 million / m³, foot Lake -14 thousand/ha, water volume 0.8-1.0 million/m³, Lake Khadija - 6-8 thousand/ha, water volume 100-140 million/m³, Lake Devxona - 1.3 thousand/ha, water volume 80-100 million/m³, Lake Zikri - 2.0 thousand/ha, water volume 35-40 million / m³. The total area of these lakes is approximately 101 thousand/ha, and the volume of water is Z - 4 billion/m³.

Due to atmospheric precipitation in the steppe zone, a large amount of water is formed in winter and spring. Our ancestors used such waters effectively. The volume of water generated by atmospheric precipitation in the Bukhara region exceeds the capacity of the duckling (1 billion m³) by five times (X.Toshov, 2008). Many scientists have studied the water resources of Bukhara region and their geographic aspects and have published literature (Table 1).

Sources of water resources of Bukhara region

№	Author (co-author)	Source name	Publishing and year	Type of source
1	Baratov.P	Natural resources of the Zarafshan Valley and their use	T., Fan Publishing House, 1977. p. 116.	Monograph
2	Muhammadjonov A.R	Irrigation history of lower Zarafshan Valley	T., 1972.	Monograph
3	Nazarov I.Q., Allayorov I.Sh	Geography of Bukhara. Part one	Bukhara, 1994.- 67 б.	Instruction
4	Nazarov I.Q	Abiogenic flows in arid geosystems: optimization природопользования.	T., "Fan", 1992.	Monograph
5	Rahmatov Yu.B	Natural conditions and landscape zoning of the Karakul delta of the Zarafshan River and its agricultural development.	Tashkent, «Fan». 1984.-102 p.	Monograph
6	Tagiyev M	The waters of Amudarya are in the fields of Bukhara.	T.: Fan, 1988. – 56 p.	Instruction
7	Talipov G. A	Land resources of Uzbekistan and problems of their rational use.	T. Uzinform. 1992. – 236 p.	Monograph
8	Toshov X.R	Effective use of desert landscapes and their agroimonomies (on the example of Bukhara region).	Tashkent. 2008 year. 153 p.	Prepared dissertation for obtaining the scientific degree of the candidate of Geographical

				Sciences.
6	Toshov X.R., Rahimov O.H., Hikmatova G.I	Water value	Bukhara, "Durdana" 2018. 70 p.	Instruction
7	Hayitov Yo. Q	Zarafshan Oasis is the formation of recycled wastewater, their purification and secondary use	Tashkent, 2017	Prepared dissertation for obtaining the scientific degree of the candidate of Geographical Sciences

Of course, the "root" of most global problems is the result of the attitude of people to anthropogen factors, that is, natural resources. It is no secret that their solution is also human dependence on themselves[3]. In place of the conclusion, it should be noted that the study of sources of Water Resources will once again witness the centuries-long toil of the people of Bukhara, located in the lower Zarafshan region for centuries. It further increases them the nature of the ylka and the feelings of appreciating this rare blessing of him, it is no doubt that in pirorvardi obi will enter life as a blessing.

Used literature

1. Nazarov I.K., Allayorov I.Sh. Bukhara geography. Part one. Bukhara, 1994.- 67 b.
2. GypsophilaR. Effective use of desert landscapes and their agroimonomies (on the example of Bukhara region). Authorship. Tashkent. 2008 year. 28 bet.
3. GypsophilaR., Rahimov A.H., Hikmatova G.I. Water value. Bukhara, "Masterpiece" 2018. 70 b.