Proceedings of International Conference on Educational Discoveries and Humanities
Hosted online from Plano, Texas, USA.
Date: 1st March, 2023
ISSN: 2835-3196 **Website:** econferenceseries.com

IMPROVEMENT OF RATIONAL USE OF UNDERGROUND WATER.

[1]Tuxtayeva H.T,
[2]Musulmonov F.Sh,
[3]Makhmudov M,
[4]Teshayeva S.
[1,2,3,4]"Bukhara Institute of Natural resources management of National Research University of Tashkent Institute of Irrigation and Agricultural Mechanization Engineers , 32, Gazli shokh ave., Bukhara, 105009, Uzbekistan

Annotation: In the area where the station operates, there are more than 50 sources that can pollute groundwater. Most of them are poultry factories, livestock complexes, oil depots, warehouses where toxic chemical fertilizers are stored, clarifiers and waste water collectors of industrial enterprises, etc.
Today, the tasks of state monitoring of groundwater in Bukhara region include the following tasks:
Collection and verification of primary data on newly drilled wells used in Bukhara region.
Repeated information about the condition of the bore wells used in the Ukuzgok, Karagota, Bukhara-Artesian, Kokcha, Mountain massif, Garbiy-Kashkadarya underground water deposits in the desert region and in the irrigated areas of the Bukhara region. data collection and verification.
Collecting information about bore wells that have become unusable in the territory of Bukhara region.

Key words: collectors, poultry factories, fertilizer, livestock, wells.

Hydrogeological research of consumption and pollution of groundwater in the territory of Bukhara region and control of their rational use started mainly in 1959-1960. Issues related to the control of underground water are diverse, and it has been studied in several stages until now.

The first stage: included the period from 1960 to 1969. During this period, the Bukhara hydrogeological station is located in its territory, collects information about all used boreholes, compiles their passports and compiles a general catalog of used

boreholes, conducts primary and repeated inspections and issues permits for drilled wells. work done. As a result of the primary inspections carried out in 1960-1969, the owners of the farms were identified.

The second stage: covering the period from 1969 to 1974, the use of underground water and the control of its pollution were carried out based on clearly approved methodical manuals. Re-inspection works were not carried out scattered in all directions, but were carried out according to hydrogeological sections, mines and administrative boundaries. In 1972-73, the calculation of underground water in the region was carried out, the amount of water taken from bore wells and used was determined, and the water resource was compared with the natural water resource, and the actual amount of water used was determined. For the first time, 1:500,000 and 1:100,000 scale maps showing the use of underground water of Bukhara region were compiled.

The third stage: the period from 1974 to 1988 is distinguished by the abundance and complexity of the scope of work in the field of control. In 1974, studies of the level of contamination of groundwater with chemical fertilizers and nitrates were carried out in the oasis of Bukhara region. The degree of impact of Navoi Mining and Metallurgical Combine's wastewater on the groundwater of the Bukhara oasis has been studied. A map showing the level of groundwater pollution on the territory of the region on a scale of 1:200,000 has been prepared. The study of the composition of underground water in the group's water intake facilities was carried out for the entire territory, and it was analyzed and reviewed according to the State Uniform Standard "Drinking Water" 2874-82.

On March 20, 1975, the Regulation on "Groundwater Report" was approved, and work was conducted on this basis. Starting from this year, a report on the state report of underground water will be written and submitted once a year.

The fourth stage: includes the period after 1988, that is, from the establishment of the state committee for nature protection to the present. During this period, the study of groundwater consumption and pollution by hydrogeological methods, which began in the third stage, was continued. Repeated and primary examination of boreholes used in artesian basins, study of the composition of groundwater in group water intake facilities, chemical fertilizers, water from industrial enterprises and ditches to groundwater. The study of the secret level was continued. At the same time, the work of collecting information about unusable bore wells (FBQ) was

carried out. During this stage, the FBQ was inventoried one by one, and objects that could have a negative impact on groundwater, i.e. objects that could be polluted, were reviewed and inventoryed, and these works are still ongoing. During this period, in 1995, Bukhara GG and IG party was renamed as Bukhara hydrogeological station (Bukhara GGS). Taking this into account in the next stage, it is necessary to increase the number of monitoring boreholes at the required depths (on the basis of certain guidelines) in the areas where pollution is rapidly occurring, and to study the spread of pollution in horizontal and vertical directions. considered as

In the area where the station operates, there are more than 50 sources that can pollute groundwater. Most of them are poultry factories, livestock complexes, oil depots, warehouses where toxic chemical fertilizers are stored, clarifiers and waste water collectors of industrial enterprises, etc.

Today, the tasks of state monitoring of groundwater in Bukhara region include the following tasks:

Collection and verification of primary data on newly drilled wells used in Bukhara region.

• Repeated information about the condition of the bore wells used in the Ukuzgok, Karagota, Bukhara-Artesian, Kokcha, Mountain massif, Garbiy-Kashkadarya underground water deposits in the desert region and in the irrigated areas of the Bukhara region. data collection and verification.

• Collecting information about bore wells that have become unusable in the territory of Bukhara region.

• Review of objects that have a negative impact on underground fresh water reservoirs located in the territory of Bukhara region and may pollute them.

• Study of changes in the quality of underground water taken from the group's water intake facilities.

• Review and study for coordination of special permits for water use and documents prepared for drilling used wells.

• Compilation of information set of hydrogeological data published once a year on confirmed and unconfirmed underground water reserves, level changes, chemical condition, depletion, pollution and control of their rational use.

• To study the level of pollution in areas where minerals are washed with alkalis and around waste water collectors of industrial enterprises.

• Preparation of hydrogeological conclusions, providing information about the state of underground water to the court and necessary organizations.
• Keeping the state cadastre and reporting of underground water

References:

1. Bukhara Hydrogeological Station Report, 2017.
3. Stepanov I. N. Theory of plastic relief and new thematic maps. - M.: Nauka, 2006. 28 p.
3. Sabitova N. I., Rozikulova O. Sh. Geosystems of the Zarafshan river basin and their soil-ameliorative properties. //International scientific and practical conference. material. Tashkent: UzMU, 2006. p. 82-83.
4. Tukhtaeva Khabiba Toshevna. Mobilizing local water resources for the development of local desert irrigation systems// European Sciences review. Austria, Vienna No. 1-2.2018, January-February.–P. 13-15.
5. Tukhtaeva Kh.T. Technology of water supply and sanitation in Kyzylkum. Journal "Problemy osvoenie pustyn" 2nd issue, Ashgabat, 2010 No. 3-4.