

HYDROGEOLOGICAL RESEARCH OF CONSUMPTION AND POLLUTION OF UNDERGROUND WATER

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ABSTRACT

In this article, recommendations are given on the existing irrigated areas in the Republic of Uzbekistan, their distribution by the level of salinity, as well as practical measures to prevent secondary salinity in the irrigated areas of Bukhara region. In the final part of the article, recommendations were given to land users on the effective use of irrigated areas in farming, methods for increasing the yield of agricultural crops.

Keywords: Irrigated area, salinity level, salt stains, collector-drainage water, salt content in the soil, salinity, irrigation norm, mineral content of groundwater.

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 conducted 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 the State Uniform Standard "Drinking Water" 2874-82 was analyzed and reviewed.

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.

At 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 considered and inventoried, and these works are still ongoing. In the same period, from 1995, the Bukhara GG and IG Party was renamed 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.

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REFERENCES:

1. The drip irrigation method is a guarantee of high yields JA Dustov, NS Xusanbayeva, MM Radjabova - IOP Conference Series: Earth and Environmental ..., 2022
2. НАУЧНЫЕ ОСНОВЫ ВЛИЯНИЯ ПОДЗЕМНЫХ ИСТОЧНИКОВ НА ГОДОВОЙ ПРИРОСТ РАСТЕНИЙ В СОВРЕМЕННЫХ ПРИРОДНЫХ УСЛОВИЯХ ШР Ахмедов, ИН Турсунов, MM Ражабова - Экономика и социум, 2022
3. Sug'orishda yer osti suvlaridan ratsional va ekologik xavfsiz foydalanishning ilmiy asoslari (kungaboqar misolida) SR Akhmedov, IN Tursunov, MM Rajabova, SH Hakimov - Science and Education, 2022
4. Scientific basis of rational and ecologically safe use of groundwater in irrigation (in the case of sunflower) SR Akhmedov, IN Tursunov, MM Rajabova... - Global Scientific Review,
5. Scientific basis of the effect of groundwater sources on annual plant growth in current natural conditions SR Akhmedov, XT Tuxtaeva, ZU Amanova... - IOP Conference Series: Earth and Environmental ..., 2023
- 6, Application of drip irrigation technology for growing cotton in Bukhara region B Matyakubov, D Nurov, M Radjabova, S Fozilov - AIP Conference Proceedings, 2023