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## **SUSTAINABILITY OF MELIORATIVE STATE OF MALIKCHOL**

### **IRRIGATED LAND**

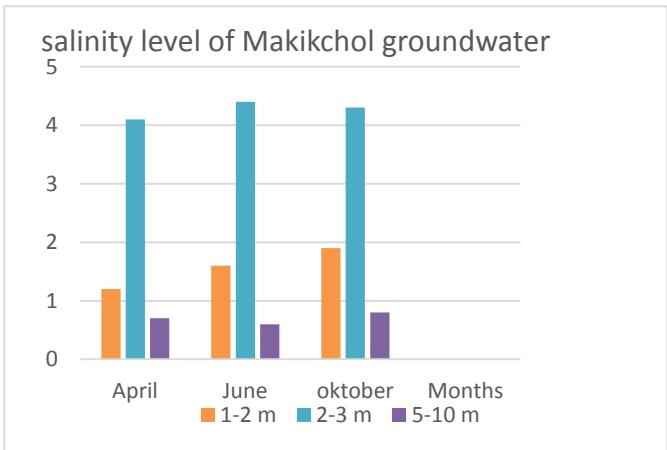
**Abstract.** This article is devoted to optimization of the ecological situation of irrigated lands in the Malikchol. The work also highlights the issues of the environmental problem, the resulting impact of sewage on the pollution of the Malikchol, as well as their impact on agricultural crops.

**Key words:** agriculture, ecological situation, irrigation facilities, meliorative state, irrigated lands, valley landscapes.

The Zarafshan Oasis is densely populated in Central Asia and is one of the developed regions of ancient art, farming, trade, that is, one of the Centers of civilization of the world. The fact that the Oasis was located in the center of the great caravan routes from ancient times, along with the development of international relations, led to a high content of craftsmanship, peasant culture. The unique recurrent nature of the oasis, its favorable climatic features, its convenience allow the development of agricultural livestock and other rural fields. The development of rural and urban settlements in the oasis has led to a quantitative increase in population, which in turn has led to the discovery of agro-technological ways to produce more land, requiring more food production, and over the next 50 years cotton monopoly has led to further land exploitation, that is, to treat the land with various chemical fertilizers, increase the amount of pesticides, the use of chemical fertilizers in excess of the norm, the violation of the reclamation of irrigated lands, the organization of irrigation without following the rules of irrigation, raising groundwater levels caused the departure. One of the urgent tasks today is to eliminate it, improve the reclamation of lands, create low-water-requiring plants (gardens and vineyards). In our research work, we aimed to develop measures and recommendations to address the environmental problems in

the region by analyzing the geo-ecological situation in Malikchol, located in the lower part of the Zarafshan oasis. The development of Malikchol has led to an increase in the number of settlements, an increase in water and land use. Non-compliance with agro-technical rules in the use of water in the region has led to an increase in groundwater levels over the years as a result of disturbance of soil-water balance, excessive use of chemical fertilizers and pesticides in land use has led to soil contamination and increased alkalinity and an increase in groundwater levels, with high levels of alkalinity in the soils, led to soil salinization and swamping, limiting land use. In recent years, a number of measures have been taken to improve the reclamation of soils, which has led to the optimization of the ecological condition of soils. To date, oasis landscapes have been continuously studied, and studies show that many problems have arisen in Malikchol landscapes. Carrying out landscape research based on modern methods, analyzing and evaluating the existing opportunities for their elimination, identifying current problems and developing solutions on a scientific basis is an important issue. The Decree of the First President of the Republic of Uzbekistan dated October 29, 2007 "On measures to radically improve the system of land reclamation" and the program for 2008-2012 are aimed at radically improving the ecological condition of nature, especially water and land resources, which are its main factors. Thus, with the further development of sectors of the economy, the demand for water and land productivity will increase, and in the coming years to adopt a number of laws and regulations to improve the reclamation of irrigated lands, including:

- In the strategy of actions of the President of the Republic of Uzbekistan for further development of the republic for 2017-2021 "Further improvement of the reclamation of irrigated lands, development of a network of land reclamation and irrigation facilities, introduction of intensive methods of agricultural production,



first of all, modern water and resource-saving agro-technologies, use of high-yield agricultural technologies" is specially mentioned and measures are outlined in the state program in this regard, which indicates how relevant this issue is.

Our analysis of the data presented below shows that improvement of soil and water regime in Malikchol, improvement of soil reclamation, lowering of groundwater level, ie construction of ditches and collectors, optimization of ecological situation in the region affect to increase land use, to achieve high yields of agricultural crops, and to a certain extent to achieve food security. The normalization of soil and water balance in the region also serves to solve environmental problems in the region, that is, to reduce the level of salinity of drinking water and to use it.

In short, the identification of environmental problems in Malikchol, which can be solved through scientific analysis, will normalize the groundwater level and the level of mineralization, which will lead to the normalization of soil water balance and eliminate soil salinization.

Removal of groundwater from irrigated areas in Malikchol through ditches and collectors will improve the reclamation of soils.

A scientific, practical approach to the above issues and their gradual solution is a guarantee of environmental sustainability in the region.

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