

FEATURES OF DETERMINING THE COST OF RURAL POPULATION LAND ON IRRIGATED LAND

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Abstract. *This article briefly discusses the features of determining the cost of land in rural settlements created under irrigation conditions. The main attention is paid to hydro-reclamation systems, it is recognized that the regions engaged in irrigated agriculture depend on natural-climatic and anthropogenic-economic conditions.*

Keywords: *irrigated lands, natural-climatic and anthropogenic-economic conditions, irrigation systems, reclamation measures, monitoring.*

The importance of land reclamation in the territory of Central Asia is the role of the water-salt system in ensuring the productivity of irrigated lands, as well as nutrition and microbiological order of the soil.

The following basic conditions at the local level, as well as the areas of influence of existing irrigation and drainage systems on irrigated lands and its factors are taken as the basis for therapeutic and preventive monitoring of the modern water-salt regime:

- Acceptance of water as a limiting factor due to its scarcity and all methods of monitoring the water-salt regime on irrigated lands are based on the prism of water conservation (savings) (taking into account organizational and technological, economic and construction and technical methods) and a clear natural and technical with an economic goal determined by creating acceptable reclamation procedures in the systems;

- it is necessary to consider the issues of monitoring the water-salt system as a whole with agricultural production systems and hydro-reclamation systems on irrigated lands in order to obtain a given (targeted) planned productivity with little impact on environmental consequences;

- The need for a legal report on the natural and economic conditions, characteristics of the territory under consideration, economic requirements, as well as calculations of the average annual distribution of the water balance and the interdependence of variable elements;

- A systematic approach to monitoring studies has been adopted as a methodological basis. In this case, the reclamation monitoring model is recorded taking into account the water-chemical balance of various natural and technical elements in hydro-reclamation networks;

- changes in the natural and economic conditions of the water-salt regime are taken into account in order to make adjustments to the complex of reclamation measures;

- It is necessary to assess and report on the repair work in irrigation and drainage systems to ensure and maintain an optimal water-salt regime on irrigated lands. At the same time, based on the dynamic characteristics of the water-salt regime and water availability of irrigated lands, it is necessary to organize coordinated monitoring observations aimed at improving soil fertility and increasing agricultural productivity.

The problem of ameliorative monitoring of the water-salt regime of irrigated lands includes the following main complex technological issues:

- assessment of the cultivation of agricultural products based on the efficient use of water and land resources by maintaining the technical condition of irrigation and ditches systems in reclamation activities;

- analysis of undeveloped lands, low-yielding lands;
- forecasting the ameliorative situation and environmental consequences;
- selection of options for measures to improve the ameliorative situation;
- selection of the best predictable method of reclamation for each specific object of natural reclamation, etc.

The final part of reclamation monitoring is the implementation of optimal engineering and technical measures to increase the productivity of land, water and production resources using water-salt regimes and a hydromelioration system.

In this direction, a special place is given to the organization of the management of these processes.

In general, the goals of monitoring and management of its results in the course of land reclamation activities have a comprehensive description.

Here, in the hydromelioration system:

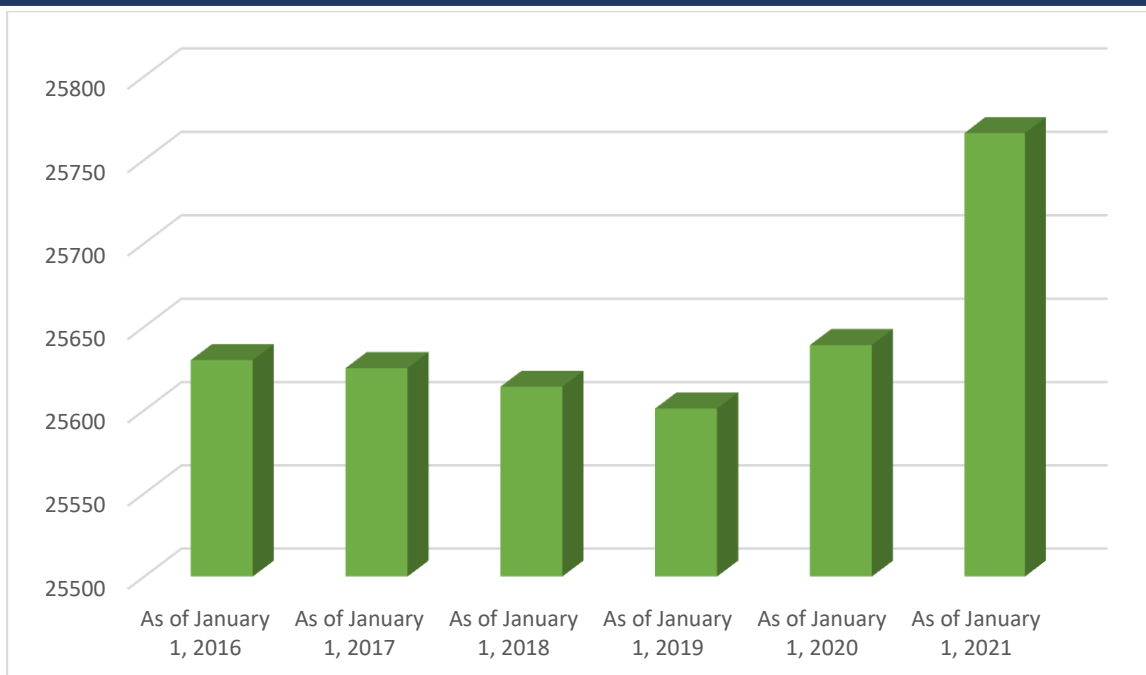
- Improvement of the water-salt regime of soils and groundwater while increasing the productivity of irrigated lands;
- provision of irrigated lands with the necessary water during the vegetation and non-vegetation periods, as well as drained lands, if necessary;
- minimal negative environmental impacts;
- it is necessary to determine the socio-economic conditions of agricultural production on reclaimed lands.

The declared tasks of irrigation and drainage systems are the study of monitoring objects. A.G. Mamikonov (1981) singled out two main indicators of the efficiency of the irrigation and drainage system and many factors interacting with it.

A separate place in the composition of agricultural land is occupied by agricultural land. They are subdivided into arable land, perennial orchards (vegetable gardens, vineyards, orchards, fruit nurseries and orchards), barren lands, hayfields and pastures. As of January 1, 2021, the area of their land is 25,766 thousand hectares, or 57.4% of the total land area, of which 3,730.1 thousand hectares are irrigated types of agricultural land. The distribution of irrigated agricultural land by republics is shown in Figure 1.

Figure 1.

Distribution of irrigated agricultural land by republics (in thousand hectares).



Irrigated lands include lands suitable for agricultural use and irrigation, the water resources of which are associated with an irrigation source capable of providing irrigation of these lands with a permanent or temporary irrigation network. Bodies of agriculture and water management are obliged to provide water to the owners and users of lands with irrigated lands, taking into account the shortage of sources for irrigation in accordance with the established limits in accordance with the documents of the law on water supply.

Irrigated lands must be protected by special guards. Irrigated lands must be specially protected and their transfer to non-irrigated lands is prohibited. By decision of the President of the Republic of Uzbekistan, it is allowed to allocate irrigated agricultural land for the construction of enterprises, buildings and structures. Arable land includes all arable land on which crops are grown and continuously used. Arable land is divided into two types: irrigated and dry land.

In the Republic, as of January 1, 2021, the total area of arable land is 4022.9 thousand hectares, including the total area of irrigated arable land 3252.1 thousand hectares or villages; 12.6% of types of agricultural land, the total area of rainfed arable land is 770.8 thousand hectares or 3.0% of agricultural land. Table 1 and Figure 2 show the changes in irrigated arable land in the Republic of Karakalpakstan, regions and the city of Tashkent in 2015-2020.

Figure2.

Changes in irrigated fields in the Republic of Karakalpakstan, regions and the city of Tashkent (in thousand hectares)

№	Names of Republic, cities and regions	Land areas as of January 1 of the corresponding year						The difference compared to 2020
		2016	2017	2018	2019	2020	2021	
1	Republic of Karakalpakstan	418.1	418	418.5	418.5	418.5		
2	Andijan	203	202.5	202.4	202.1	200.6	200.4	-0.2
3	Bukhara	200.8	201.2	199.7	199.5	200.1	200.1	
4	Jizzakh	261.4	261.1	260.7	258.8	259.9	260	0.1
5	Kashkadarya	420.5	420.5	419.8	417.6	417.3	417.3	
6	Navoi	91.1	91.4	91.7	91.7	92	92	

7	Namanghan	193.1	192.5	191.5	190	188.2	186	-2.2
8	Samarkand	251.9	248.9	246.5	247	246.9	246.7	-0.2
9	Surkhandarya	240.9	240.4	239.9	239.3	238.6	238.6	
10	Sirdarya	249.8	249.7	249.9	249.4	249.2	249	-0.2
11	Tashkent	299.5	298.9	297.8	295.7	295.7	292	-3.7
12	Fergana	247.7	247.7	247.7	247.5	247.6	245	-2.6
13	Khorezm	206.3	203.2	205.5	205.2	205.3	205.3	
14	Tashkent city	0.4	0.4	0.1	0.1		1.2	1.2
	Total	3284.5	3279.4	3271.7	3262.2	3259.9	3252.1	-7.8

As seen from the table above, irrigated arable land in most regions areas are decreasing. Basically, this is the allocation of land for state and public needs.

establishment of new (intensive) orchards and vineyards on the basis of state decisions and programs is on account.

Figure 3.

Distribution of agricultural areas by types of land (in thousand hectares).

No	Names of area	Total land area	Cultivated land	Multiple tree plantations	Reserve lands	Hayfields and pastures	Total agricultural land	Homesteads and lands of horticultural, viticultural and vegetable growing associations	Lands under reclamation construction	Woodlands	Shrubberies	Other lands
1	Republic of Karakalpakstan	3261	414.7	7.8	9.4	1768.9	2200.8	40.5	23.5	49.6	44.1	902.5
2	Andijan	361.1	199.1	3.5	0.5	15.6	247.4	44.9	0.9	1.8		66.1
3	Bukhara	3441.4	199.6	2.7	6.6	2355.3	2582.2	58	3.9	7.9	5.1	784.3
4	Jizzakh	1400.6	483.8	2.6	1.7	618.4	1139	31.1	5.1	9.4	0.1	215.9
5	Kashkadarya	2321.8	671.1	3.2	4.4	1214.1	1944	73.8	18.6	11.3		274.1
6	Navoi	7806.2	119.6	9.8	6.6	7284.7	7420.8	24.3	2	1		358.1
7	Namanghan	486.1	183.8	4.2	2.4	43.5	275.9	49.2	0.8	5.2		155
8	Samarkand	1475.8	425.4	6.7		706.8	1201.1	79.6	3.6	4.5		187
9	Surkhandarya	1356.1	276.3	3.1		689.7	999.4	58.4	1.3	29	0.1	267.9
10	Sirdarya	371.2	246.5	7.6	9.2	18.2	281.9	18.4	3.2	1.8		65.9

					6							
1 1	Tashkent	774.1	290. 1	5 3. 5	0 .4	207 .7	582 .1	57.4	0.1	7.7	1	125.8
1 2	Fergana	561	244. 2	5 0. 6		19	313 .8	65	1.8	6.9		173.5
1 3	Khorezm	438.4	202. 9	1 2. 8	3 . 7	41. 6	261	51.4	1.1	14.5		110.4
1 4	Tashkent city	2.3	1.2				1.2	0.5				0.6
	Total	24057. 1	3988 .4	3 7 6. 4	4 5 .3	149 83. 5	194 50. 6	652.5	65.9	150. 6	50. 4	3687.1

REFERENCES

1. Fundamentals of the state cadastre [Yarmatova D.S., Babozhonov A.R., Rakhimov A.R. - T.: "Chilpon", 2014.].
2. Basics of land use [Babazhanov A., Rzibaev S., Mazhitov B. - T.: 2018.].
3. Land cadastre [Babozhonov A.R., Rahmonov K.R., Gofirov A.Zh. - T.: "TIMI", 2008.].
4. Land management support for the implementation of state programs and priority national projects for the development of agriculture and other sectors of the economy [Volkov S.N. – M.: GUZ, 2017.].
5. Land management and cadastres [Sizov A.P. - M.: "MIIGAiK", 2016.].
6. Land management in the Kyrgyz Republic [Volkov S.N., Denisov V.V. – Second edition, Moscow: GUZ, 2014.].
7. Land Cadastre [Chertovitsky A.S., Bazarov A.K. –T.: 2012.] 8. The main directions of agricultural land use in the Russian Federation Federations for the future [Volkov S.A. – M.: GUZ, 2018.] 9. Land use management [Chertovitsky A.S., Bazarov A.K. –T.: 2010.]
8. Earth monitoring. Monograph. R.A.Turayev.2022 .