



ASSESSMENT OF TARGETED LAND USE OF LAND CADASTRAL INDICATORS

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ABSTRACT

Keeping the land account in proper modern methods and carrying out a complete survey of the land areas and ensuring the purposeful use of the land. Establishing the purposeful use of land through indicators based on the land cadastre is important in ensuring economic stability. From this point of view, the article provides information on the formation of cadastral indicators based on the geodatabase ArcGIS program and thereby achieving economic stability in the regions, establishing the purposeful use of land in the regions and their control.

KEYWORDS

Cadastre, land, land cadastral system, GIS, ArcGIS, land accounting, cadastral system, socio-economic stability, territory, efficiency.

INTRODUCTION

In the course of the transition to market relations of the Republic of Uzbekistan, the objective basis of managing the effective use of land resources is the mechanism of market economy laws. Regulation of land relations serves to regulate land relations as part

of production relations based on the legal basis of management [6]. The system of land resources and their use in agriculture differs from other resources and their use by a number of features. This requires defining the specific features of scientific and

methodical issues related to land resources disposal, their ownership and their use relations in agriculture and making changes related to their practical application. Currently, the use of land resources in agriculture and its results are functionally directly related to the use of other resources, it has an absolute character.

At the current stage of the economy, one of the most important tasks is to provide stable food products for the population, to increase the production of agricultural products, as well as to increase the volume of fish farming, to process and preserve them based on modern techniques and technologies, and thereby to export the volume of processed competitive products. increase[2].

Large-scale reforms are being implemented to protect the legal interests of farmers and landowners operating in our republic, to steadily increase the volume of food production and meat products, to introduce market mechanisms in the system and to implement them.

From this point of view, in the Action Strategy for the further development of the republic proposed by the President of the Republic of Uzbekistan, “Further support for agricultural producers, ensuring the efficiency of the use of arable land by farmers, peasants and homesteads, ultimately fundamentally changing the attitude of landowners to increase their income” and Uzbekistan Pursuant to the decision of the President of the Republic of January 13, 2022 “On

additional measures for the further development of the fishing industry” No. Issues such as increasing the size and strengthening the feed base of fisheries were set as priority tasks. The implementation of these tasks shows the need to develop the activity of growing agricultural products in peasant farms [3].

Also, the analysis of scientific literature related to the field shows that, along with foreign scientists, several scientists of our republic have also conducted scientific research on land accounting using high-level GIS software, transparent and fast basing of subjective indicators of land. Therefore, the theoretical and methodological foundations of the issue of maintaining a geo-information system were obtained from foreign scientists J. Bouma, P.A. Burrough, J.J. de Grijter, E. Van Ranst, A.K.L. Johnson, & A.B. McBratney and others researched the theoretical and methodological foundations of process automation by A.A. Varlamov, K.M. Melikhov, S.V. Kozmenkova, S.V. Kasyanov, V.I. Kusov, A.L. Ilinikh, Yu. Developed by V. Ryabov, E.V. Belorustseva, M.E. Bukovsky, and others. According to the works of A.S. Altiev, A.R. Bobojonov, and K. Rakhmonov, among the scientists of our republic, it includes studies on the calculation of land in terms of quantity, their distribution by certain administrative-territorial units, land users, and land types.

Today, in different regions of our country, the researches on conducting and forming the land account in modern ways, integrating the results of field

research into the geodatabase, geovisualization of objects using the interpolation method, analysis, processing, digitization of processes based on the “ArcGis” program have not been sufficiently studied [4]. For this reason, there was a need to digitize the land accounting system based on the ArcGis program.

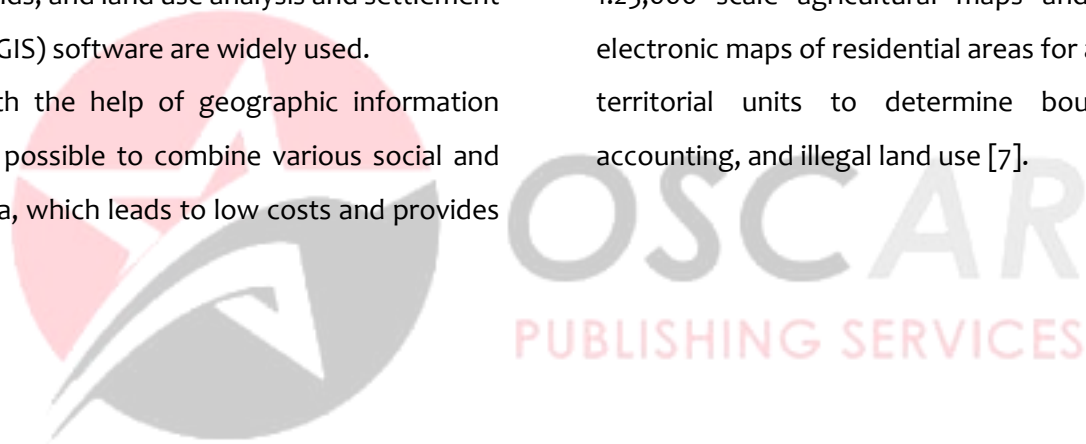
METHODS

The boundaries of settlement lands located in district centers, cities, settlements, and villages are the definitive signs of inhabited lands and distinguish them from other lands, and land use analysis and settlement land change (GIS) software are widely used.

Currently, with the help of geographic information systems, it is possible to combine various social and economic data, which leads to low costs and provides

the opportunity to collect and process various data with accurate calculation results necessary for land use planning (Fig. 1). In the geodatabase, the areas of the fishing and fishing lands of the Republic of Karakalpakstan were determined, formed in vector thematic layers, and geovisualized in the cross section of the regions.

In addition, cartography, cadastral and land plot accounting were modernized. This created a cartographic basis for the creation of 1:10,000 and 1:25,000 scale agricultural maps and 1:2000 scale electronic maps of residential areas for administrative-territorial units to determine boundaries, land accounting, and illegal land use [7].



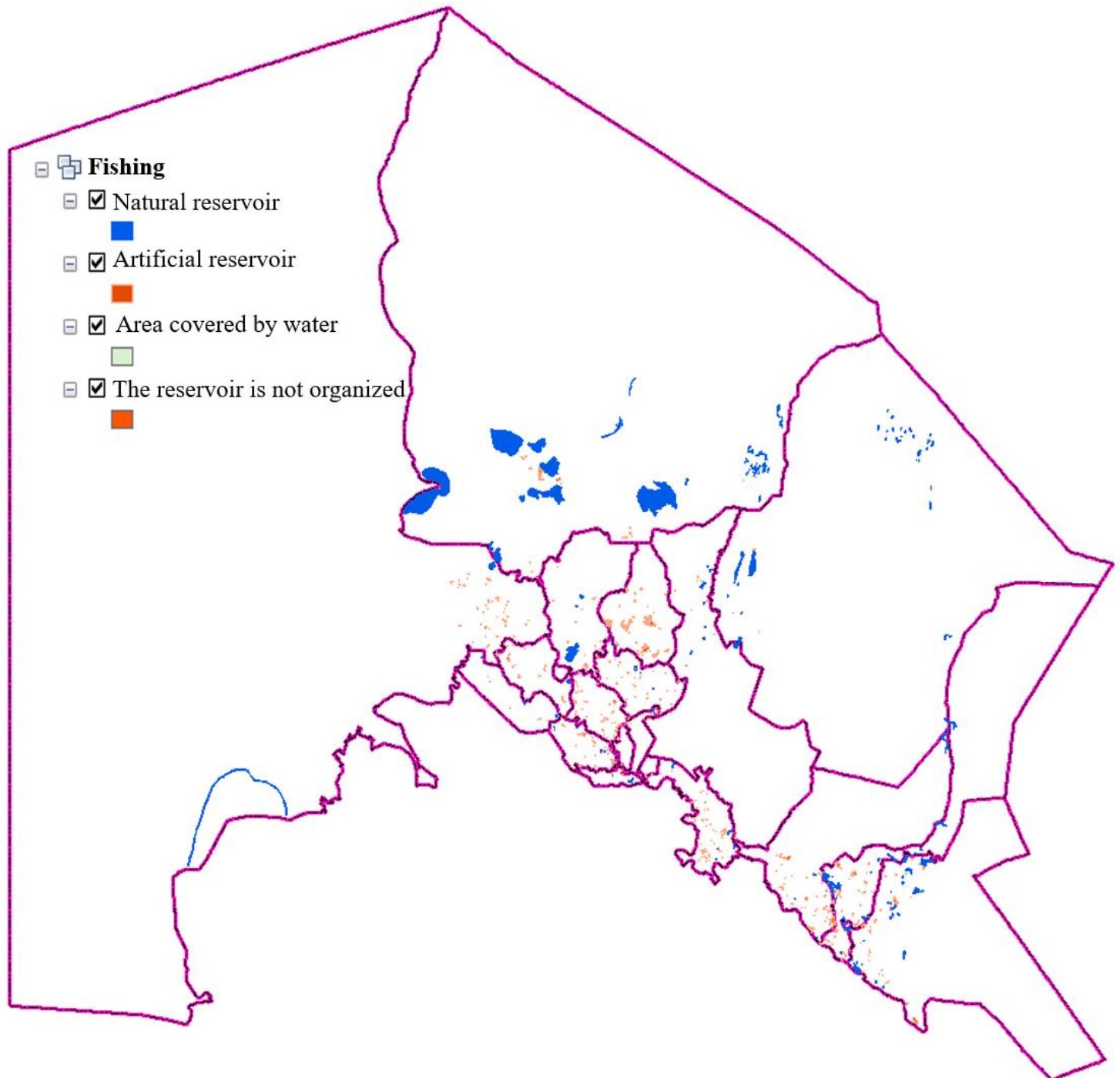


Figure 1. Visualization of the fishing water basin of the Republic of Karakalpakstan in the geodatabase

If we compare with developed countries, it seems that there are a number of systemic problems in the level of land and water resource use. Therefore, in the strategy, special emphasis is placed on increasing labor productivity in agriculture, effective use of existing land resources, and wide application of innovative technologies. The issue of turning land into an economic asset through accurate accounting of land and achieving quantitative efficiency and transfer to the state register was fully explained above. Therefore, as a continuation of economic growth in the regions, in addition to ensuring food security and creating jobs, increasing investment flows, the participation of land in ensuring the economic stability of the district is the main factor.

The final data for obtaining any land account should be used to determine the borders of the Republic of

Karakalpakstan and all regions when determining the borders of the administrative-territorial divisions of the region, land plots relative to the location, establishing their total area and the areas of land types, determining the lands intended for fishing.

It was found that the tax debt of 5,015 fishing farms operating in the artificial basin in the republic today is 54.1 billion. amounting to soums, of which 2,080 farms with an area of 97,815 hectares are not state registered [5].

During the land accounting, the land was divided into 2, such as natural water bodies, artificial water bodies, etc. According to it, it became known that as a result of the arbitrary organization of water bodies, the state budget lost 646,689,120 soums from land tax (Table 1).

Table 1
Analysis of fisheries in the Republic of Karakalpakstan until 2022

№	District and city name	As of January 1, 2022												
		Type of reservoir (natural, artificial)		From that								All types of farms	Total Fishery Land Rent Tax	Total damage caused by fishing
				Number of natural water bodies		Artificial water body number		The water basin is not established		An illegal water reservoir has been established				
		the number	area, ha	the number	area, ha	the number	area, ha	the number	area, ha	the number	area, ha	tons	million soums	million soums
1	2	3	4	5	6	7	11	12	13	14	15		18	
	TOTAL	481	50 536	144	45 075	337	5 461	99	2 955	254	808	6 204	194,5	646,7
1	Amudarya district	17	409	6	182,1	11	227,0			11	20,0	953	25,0	16,0
2	Beruniy district	55	688	6	121,8	49	566,4	7	320,7	5	4,0	345	25,3	3,2
3	Buzatov district	14	4 862	3	4 465,0	11	396,8			4	3,2	184	1,2	2,6
4	Kegeyli district	36	437	4	136,6	32	300,2	21	377,1	28	393,7	421	4,3	315,0
5	Muynoq district	50	27 475	33	26 432,9	17	1 041,9	1	46,1	11	79,3	114	2,4	63,4
6	Nukus district	43	578	2	26,8	41	551,2	15	105,3	92	104,2	361	8,6	83,4
7	Taxtakupir district	21	4 424	18	4 352,8	3	71,4			52	110,0	1 052	26,2	88,0
8	Turtkul district	23	1 206	20	791,6	3	414,3	25	994,1	5	42,9	287	23,8	34,3
9	Xujayli district	36	206	4	77,0	32	129,3	4	30,0	1	3,0	123	12,1	2,4
10	Chimboy district	37	616			37	616,3	2	26,6	23	12,0	158	11,5	9,6
11	Shumanoy district	10	99	5	59,9	5	39,0	1	5,5	1	3,4	316	2,3	2,7
12	Ellikkala district	60	2 775	29	2 648,2	31	126,7	21	1 038,3	8	15,9	843	11,5	12,7
13	Konlikul district	7	154	1	57,3	6	96,2			5	4,9	223	16,8	3,9
14	Korauzak district	20	545	8	486,6	12	58,3			2	4,8	248	4,7	3,8
15	Kungirotdistrict	46	6 012	3	5 199,5	43	812,3	2	11,8	1	1,1	455	10,2	0,9
16	Nukus city									2	3,0		0,8	2,4
17	Taxiatosh district	6	50	2	36,5	4	13,9			3	3,0	120	7,7	2,4

RESULTS

According to the conducted analysis, in 2022 in the Republic of Karakalpakstan, 481 water basins and 50,536 hectares of land, the total amount of fish taken from farms of all categories reached 6,204 tons, and it

was found that 194,507,189 soums were allocated to the budget in terms of land rent tax and tax rates.

The 101,413 hectares of lands that were accounted for were transferred to the state register by issuing decisions of the district governor, based on which, in 2023, entrepreneurial activities in the direction of

fishing were started from the lands lying without purpose, and the total fishing lands were established in

715 water basins, and the land was increased to 101,413 hectares (Table 2).

Table 2
Analysis of fisheries in the Republic of Karakalpakstan until 2023

№	District and city name	As of January 1, 2024											
		Number of natural water bodies		From that								Total fish grown	Total Fishery Land Rent Tax
				Number of natural water bodies		Artificial water body number		The water basin is not established		An illegal water reservoir has been established			
		the number	area, ha	the number	area, ha	the number	area, ha	the number	area, ha	the number	area, ha	tons	million soums
a	1	2	3	4	5	6	7	11	12	13	14	15	16
	TOTAL	715	101 413	148	86 749	567	14 664	169	3 263			11 597	430,0
1	Amudarya district	85	872	6	171,0	79	701,4	8	49,5			2 031	44,4
2	Beruniy district	89	2 528	8	323,2	81	2 205,0	21	387,2			1 269	27,2
3	Buzatov district	14	4 750	3	4 465,0	11	284,5	4	57,4			179	1,9
4	Kegeyli district	34	472	4	136,6	30	335,5	20	186,9			455	12,6
5	Muynoq district	52	66 727	31	65 664,4	21	1 062,3	2	50,1			277	37,9
6	Nukus district	60	777	2	26,8	58	750,1	26	172,5			485	21,6
7	Taxtakupir district	22	4 724	18	4 630,8	4	93,3	1	0,4			1 123	6,6
8	Turtkul district	65	4 793	27	3 047,3	38	1 745,3	39	1 497,0			1 142	61,5
9	Xujayli district	37	769	4	65,7	33	703,6	6	33,7			459	11,1
10	Chimboy district	35	3 727			35	3 727,0	3	33,4			958	49,9
11	Shumanoy district	9	97	4	54,9	5	41,6	3	31,4			309	6,2
12	Ellikkala district	107	3 997	27	2 372,6	80	1 623,9	27	669,2			1 215	99,9
13	Konlikul district	29	379	1	57,3	28	321,2	3	12,5			550	8,8
14	Korauzak district	18	564	8	390,6	10	173,5					257	21,8
15	Kungirot district	47	5 958	2	5 199,5	45	758,5	3	64,2			451	7,9
16	Nukus city	4	101			4	100,6	1	4,1			9	3,4
17	Taxiatosh district	8	180	3	143,6	5	36,6	2	13,0			428	7,4

At the same time, the total amount of fish taken from all categories of farms increased from 6,204 tons to 11,597 tons, and it became known that 429,999,913 soums were spent on the budget in terms of land rent tax and tax rates [6].

It is necessary to give an economic interpretation to the concept of non-purpose, that is, we believe that it is inappropriate to call it non-purpose when we transfer land plots that do not give passive income to income-generating land.

If active lands were transferred to passive lands, then it is correct to say that it is pointless from the economic point of view. For example, for the development of fisheries, we transferred plots of reserve land to the fishing industry, this is a transformation of the purpose of land use, that is, the land converted to fisheries has become a source of income [3].

It is necessary to ensure the food security of the country, to produce the products demanded by the market with good use of the available resources, and to take into account the needs of the population. But in this case, organizing production without taking into account the state of land resources can have negative consequences.

For example, planting winter cereals on highly saline soils reduces productivity, and it is recommended to plant rice mainly on saline soils. Currently, 47.8% of the total irrigated land in Uzbekistan is non-saline, 30.8% is slightly saline, 17.2% is moderately saline, and 4.2% is highly saline.

Regarding the reclamation status of agricultural lands in our republic, 38% of them are good, 53.4% are satisfactory, and 8.2% are unsatisfactory, i.e. lands with poor reclamation status. Land transformation from one qualitative state to another is generally called land transformation.

For example, planting winter cereals on highly saline soils reduces productivity, and it is recommended to plant rice mainly on saline soils. Currently, 47.8% of the total irrigated land in Uzbekistan is non-saline, 30.8% is low salinity, 17.2% is moderately saline, and 4.2% is highly saline.

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DISCUSSION

Earth transformation will be positive and negative. Positive transformation should not be allowed to pass from good lands to bad lands. Proper implementation of land reforms also increases the efficiency of land use, and land should be given to people who have experience and knowledge of working on the land, and to farms, not to those who encounter it.

At the same time, it is necessary to properly solve the conditions of ownership of the products obtained from the land, one of the most necessary factors is to ensure the interest of the land users for the purposeful use of

the land. Ensuring the purposeful use of land is largely related to the introduction of advanced technology into production, for example, the efficiency of water use in drip irrigation or rain irrigation is much better than simple flood irrigation.

For the Republic of Uzbekistan, the purposeful use of land is of great political, economic and social importance, at a time when the restoration of resources is becoming more and more difficult every year, we need to treat land resources more carefully.

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