

INVENTORY OF LAND AS THE FORMING TOOL FOR THE STATE LAND CADASTRE OF UKRAINE IN MODERN CONDITIONS

Nataliia Bavrovska, Olha Boryskevych

National University of Life and Environmental Sciences of Ukraine

Abstract

One of the primary measures of the land reform is to create the national land registry and related land information database, which can be formed only through a complete inventory of land. This article analyses land inventory data in the current stage of land cadastre functioning and development of land relations, as well as discusses justification of organizational and legislative preconditions for land inventory in Ukraine.

Keywords: land inventory, land management, the state land cadastre, foreign experience.

Introduction

Land conversion in Ukraine led to significant changes in land relations, land use and land ownership. The transition to a market economy has put the community challenges. Under these conditions, arrays of land parcels require additional continuous surveying and clarification of land ownership rights essential to prevent conflicts and loss of land relations subjects caused by unreliable public inventory information about them.

The problems of the state land cadastre and land inventory in Ukraine have been investigated in the works of national scientists, such as V. M. Gorbatyuk, B. S. Huzar, V. N. Dmytrusenko, V.M. Zhuk, D. S. Dobriak, O.S. Dorosh (Dorosh, 2015), M. N. Kalyuzhny (Kalyuzhny, 2011), A.G. Martyn (Martyn, 2011) A.M. Tretiak and others. Nevertheless, the debate about the nature and contents of the inventory of land as a means of obtaining, updating and correcting information on the status of land ownership and land use, which should be entered into the State Land Cadastre of Ukraine are continuing nowadays.

The aim of the article is to highlight the problems of effective implementation and use of land inventory materials in the current land relations in Ukraine.

Methodology of research and materials

General scientific principles, theoretical principles of economic science to evaluate the efficiency of the land inventory in the process of filling in the database of the state land cadaster serve as the theoretical and methodological basis of the research.

To achieve the aim of the research, the following research methods were used: monographic (when writing scientific works on problems of land inventory); abstract - logical (in the justification of the theoretical basis of land inventory for the purposes of the state land cadastre); analysis and synthesis (for complex assessment and justification of the current state of the land inventory in Ukraine, analysis of foreign cadastral systems); statistical, analytical, comparative analysis (the study of the inventory of land in Ukraine, establishing quantitative and qualitative characteristics of lands according to categories, owners and users), abstraction and concretization, by which the mechanism and features of reflection of inventory results in accounting were studied.

The research is based on the laws of Ukraine, decrees of the Cabinet of Ministers of Ukraine and the Verkhovna Rada of Ukraine; statistical data of the State Service of Ukraine on Geodesy, Cartography and Cadastre, State statistics Committee; monographs and scientific articles, the literature of national and foreign scientists, materials of scientific conferences, Internet resources, as well as the author's own research.

Results and discussion

The current cadastral registration system is designed to provide a permanent inventory of land in Ukraine in the process of comparing available public data on land ownership objects with their actual state and use.

It can be effective when making strategic decisions on territorial development, building infrastructure, implementation of other major investment projects for change of land use.

Development of land property relations in Ukraine has now a stronger impact on the state economy and welfare improvement. One of the key aspects of sustainable development of the economy and improvement of the investment climate is authenticity, depth and ease of access to inventory data. In this context, the construction of the cadastral system in Ukraine should be based on the best

achievements of cadastral systems of the leading countries with taking into account national traditions, laws, and technological approaches to available material and technical base.

With the adoption of the Law of Ukraine "On State Land Cadastre" we faced an urgent need for the formation of a single state geographic information data system on land located within the state borders of Ukraine, therefore improving the quality of cadastre data should be linked with inventory of lands. It is believed that the inventory will transfer land relations to a qualitatively new level of development that will answer the burning questions related to the current state of land use and tenure (Law of Ukraine, 2011).

The term "inventory" (from the Latin "invenire") is a process drawing up a detailed description of the property (Pustovit, 2000, pp. 713). Often the term "inventory" is used to determine an element of an accounting method, which is determined by the actual amount of assets, capital and liabilities as well as a comparison of the results of the accounting data.

Word form "inventory" is borrowed from German and is a derivative of "equipment" (in 1713 - "inventarium", in 1743 - "inventor" and only in 1797 - "inventory") (Bardash, 1999).

We can conclude that, at the time of its inception, inventory solved two main tasks: identified the value of property, which actually has a particular owner, and ensured its proper storage. This is because the accounting itself in ancient Egypt, China, Greece and other countries was intended more for the registration of facts than for making decisions; not only for property management, but how to ensure its preservation (Demyanenko and Chudovec, 2008).

The condition of the state land cadastre in Ukraine will soon reach the level of leading European countries, where each land parcel has its cadastral number, which will be one of the steps to complete the land reform and regulations of land relations.

In the internationally accepted definition of Cadastre, approved by the United Nations together with the International Federation of Surveyors in its Bogor Declaration at the international meeting of UN experts in inventory (1996), "inventory" means constantly updated information system data on land, divided into sections (parcels), which registered property rights (rights, burdens and responsibilities) (The Bogor declaration, 1996).

As regards the practice in the world, there are three basic inventory systems (Larsson, 2001):

- Torrence, which operates in the US, Canada and other Latin American countries.
- Napoleonic (French), at France and its former colonies.
- Prussian or German - Germany and other countries in Central and Northern Europe.

The study of modern world experience of inventories shows that in almost all developed countries this process is the task of the national scale. In most European countries land registration is in the form of land inventories, in addition, in many countries there is inventory as a form of registration of all real estate, but the more common single state cadastral registration system that contains information about legal rights, value and purpose of the estate objects.

Today in Ukraine institutional support and formation of the state land cadastre and registration of real estate significantly lags behind the needs of the practice and regulation of property relations. The creation of a single state cadastral system that provides individualization and identification of real estate and development of tax assessment institute of land is one of the major problems (Zayats et. al., 2016).

Legislature inventory of land in Ukraine is imperfect. According to the Cabinet of Ministers of Ukraine "On approval of inventory lands" (Resolution of the Cabinet of Ukraine, 2012) and Article 35 of the Law of Ukraine "On Land Management" (Law of Ukraine, 2013), state land inventory in modern conditions is designed to solve the following tasks:

- to ensure the completeness of information on all land plots, cadastral zones and quarters, administrative and territorial units in Ukraine in the state land cadastre;
- to provide validation of semantic and mapping data on land with already existing state registered documents;
- to ensure the identification and registration restrictions in land use (territorial zones) around existing objects of special regime (Martyn, 2007).

The total area of land in Ukraine is 60.4 million hectares. Of these, 70% - 42.4 million ha are agricultural land, of which 32 mln. ha are annually handled over. To compare, in Poland in agricultural production twice smaller areas are involved - 14 million ha, in Germany - 12 million ha, in Romania - 9 million ha. Amount of chernozem soil in Ukraine is the largest in the world and comprises 28 million ha.

In Ukraine, an inventory of land has been implemented since 1991 - land settlements, non-agricultural land outside settlements and agricultural lands of state properties. According to the State Service of Ukraine on Geodesy, Cartography and Cadastre in Ukraine an inventory is required for: 7 579.63 thousand ha of land settlements, 10 512.12 thousand ha of non-agricultural land outside settlements and 8463.077 ha agricultural land of state properties (Table 1). Table 1 contains the data from the State land cadastre service about of the inventory of lands in Ukraine by 01.07.2016.

As of July 1, 2016, the inventory was made for 5167.89 thousand ha, which is 68.2% from the total land area of settlements. The analysis of the data (Fig. 1) show that the inventory has been implemented in almost all the land within settlements (90 - 100%) in Vinnytsia, Rivne and Chernivtsi regions. The lowest percentage (50%) which was covered by the inventory belongs to lands within Cherkassy, Chernihiv and Zhytomyr regions. This low percentage within settlements creates issues for the organization of permanent control over land use in towns and out of towns; adoption of decisions on land relations by local authorities and executive bodies under their competence defined by the Land Code of Ukraine.

Currently in Ukraine there are 27,590 settlements, including 1,345 in urban areas; they have been incorporated in 170 communities since November 1, 2016.

The community of a village or a city, as a result of inventory, should:

- receive already created complete database of all land within the settlement in paper and electronic media. Because of this, investment attractiveness increases making easier to search for potential investors for land and urban needs;
- authorities obtain an opportunity of constant monitoring of the use of land in the settlement;
- receive an ability to identify all land users, land owners with the establishment of the boundaries of their land parcels;
- be able to identify land parcels unused or inefficiently (inappropriately) used.

In connection with the future decentralization of authorities which should take place in Ukraine and the future consolidation of communities through their associations, land inventory will be a key factor in their future success and development of each community in particular.

An inventory was made for 8401.96 thousand ha of non-agricultural lands outside settlements, which is 79.9% (Table 1). In Chernivtsi and Zakarpatska regions 100% of the inventory was implemented. According to Zaporizhia, Ternopil, Vinnytsia, Rivne, Chernihiv and Luhansk regions, surveyors conducted an inventory of more than 90% of the land. The smallest area of the implemented inventory of land belong to Sumska and Ivano - Frankivska regions (Fig. 2).

The inventory of agricultural land of state property was implemented on the area of 1549.329 thousand hectares, this is done to update the data of quantitative and qualitative characteristics of lands into categories, owners and users. This is one of the highest percentages of inventory of land in Ukraine – 18.3 % (Table 1). Only Chernivtsi region fully completed the work on land inventory (100 %). Surveyors of Ternopil, Ivano - Frankivsk, Rivne and Volyn regions partly completed the inventory of agricultural land state property (41.8% - 52.6%). The least covered territory of the implemented inventory of land belongs to 6 regions of Ukraine (10% of area) (Fig. 3).

42.1 million hectares of land were recorded in the State Land Cadastre as of January 1, 2017, which represented 70% of the total area of Ukraine. The information was recorded on 15.9 million plots of land, of which 6 million was agricultural land with the total area of 21.5 million hectares.

Experts in land management estimated which land parcels have been irrationally contaminated and those that are subject to conservation. However, filling in the content of the national cadastral system is slow due to controversial delimitation of adjacent areas, the presence of boundary disputes, discrepancy in coordinate systems and others.

Analyzing these data (Table 1 and Fig. 1, 2, 3) it can be noted that only one region (Chernivtsi) has completed inventory of all lands. This is because currently, the volume of work on the inventory of land in Ukraine is insufficient, due to both underfunding by the state and the lack of interest in their local performance. This problem needs attention from both public authorities and local governments.

Table 1

Information of the inventory of lands in Ukraine

№	Name of administrative territorial unit	Total area region, thousand hectares	Settlements		Non-agricultural lands outside settlements		Agricultural lands of state property's	
			Total area, thousand hectares	Areas where inventory was made, thousand hectares	Total area, thousand hectares	Areas where inventory was made, thousand hectares	Total area, thousand hectares	Areas where inventory was made, thousand hectares
1	Vinnitsia region	2649.2	380.40	346.70	369.60	357.80	464.493	196.170
2	Volyn region	2014.4	312.00	241.80	561.70	493.68	234.720	98.228
3	Dnipropetrovsk region	3192.3	362.83	261.87	262.93	132.11	616.496	216.985
4	Donetsk region	2651.7	365.40	205.07	186.10	123.06	310.732	28.108
5	Zhytomyr region	2982.7	312.83	129.70	1174.00	1044.50	364.800	39.510
6	Zakarpatska region	1275.3	222.70	189.60	601.70	601.70	157.022	46.287
7	Zaporizhia region	2718.3	237.90	207.49	120.56	108.61	405.817	119.680
8	Ivano-Frankivsk region	1392.7	427.07	239.59	606.70	102.40	81.863	41.859
9	Kyiv region	2812.1	420.69	259.06	663.20	379.47	189.956	58.396
10	Kirovohrad region	2458.8	227.90	166.80	165.40	144.40	526.406	62.694
11	Lugansk region	2668.3	422.00	300.10	345.00	330.20	209.296	13.754
12	Lviv region	2183.1	438.60	306.98	722.80	552.90	349.423	61.469
13	Mykolayiv region	2458.5	146.70	105.80	163.10	144.70	449.100	59.524
14	Odesa region	3331.4	282.30	186.00	205.10	183.30	354.160	32.558
15	Poltava region	2875	426.31	236.79	289.33	228.06	514.730	20.745
16	Rivne region	2005.1	209.50	199.70	760.60	738.00	166.140	70.034
17	Sum region	2383.2	238.96	152.48	469.11	224.44	274.562	45.121
18	Ternopil region	1382.4	335.18	263.60	176.19	164.38	84.867	44.630
19	Kharkiv region	3141.8	306.74	157.00	397.96	332.41	525.811	94.472
20	Kherson region	2846.1	135.30	91.73	299.60	267.20	424.510	37.958
21	Khmelnyskyi region	2062.9	299.01	265.61	284.71	237.10	260.875	38.114
22	Cherkassy region	2091.6	284.22	138.93	334.69	265.14	319.711	59.622
23	Chernivtsi region	809.6	198.50	191.10	269.00	269.00	14.257	14.257
24	Chernigiv region	3190.2	300.80	147.30	679.60	667.80	1163.331	47.156
	Total		7579.63	5167.89	10512.12	8401.96	8463.077	1549.329

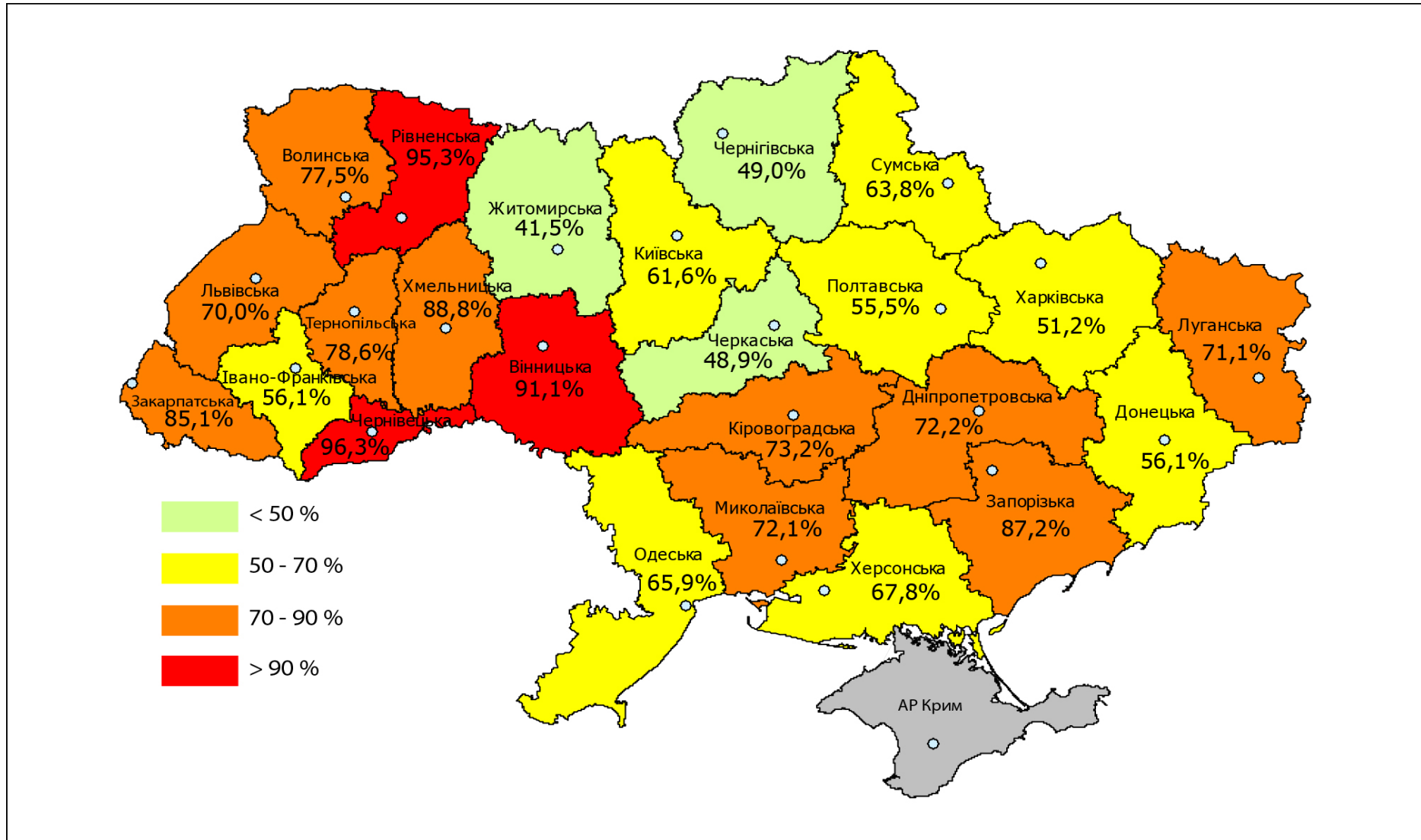


Fig. 1. The percent of lands within settlements where were inventory was made, in the structure of land region

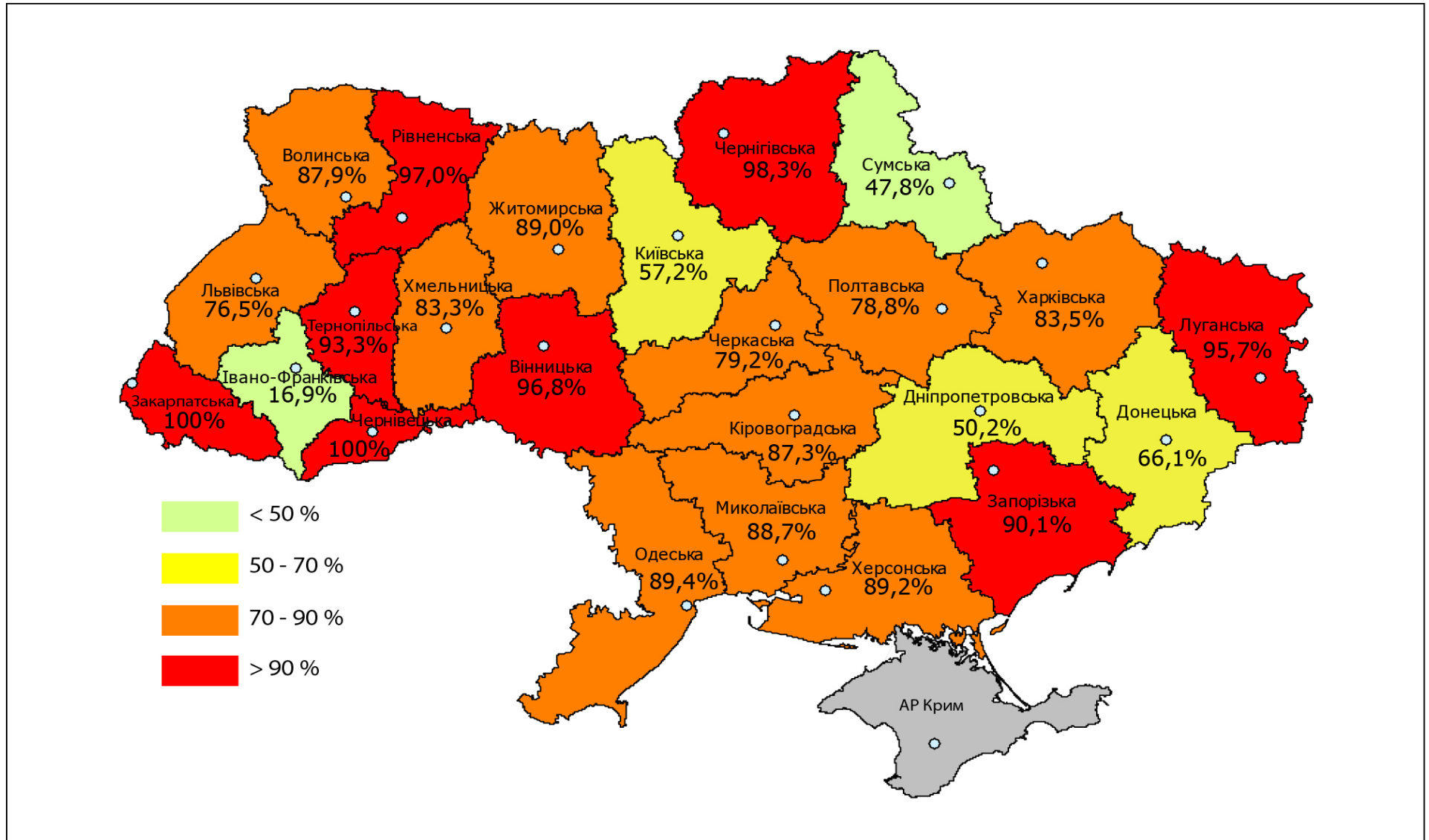


Fig. 2. The percent of non-agricultural lands outside settlements where were inventory was made, in the structure of land region

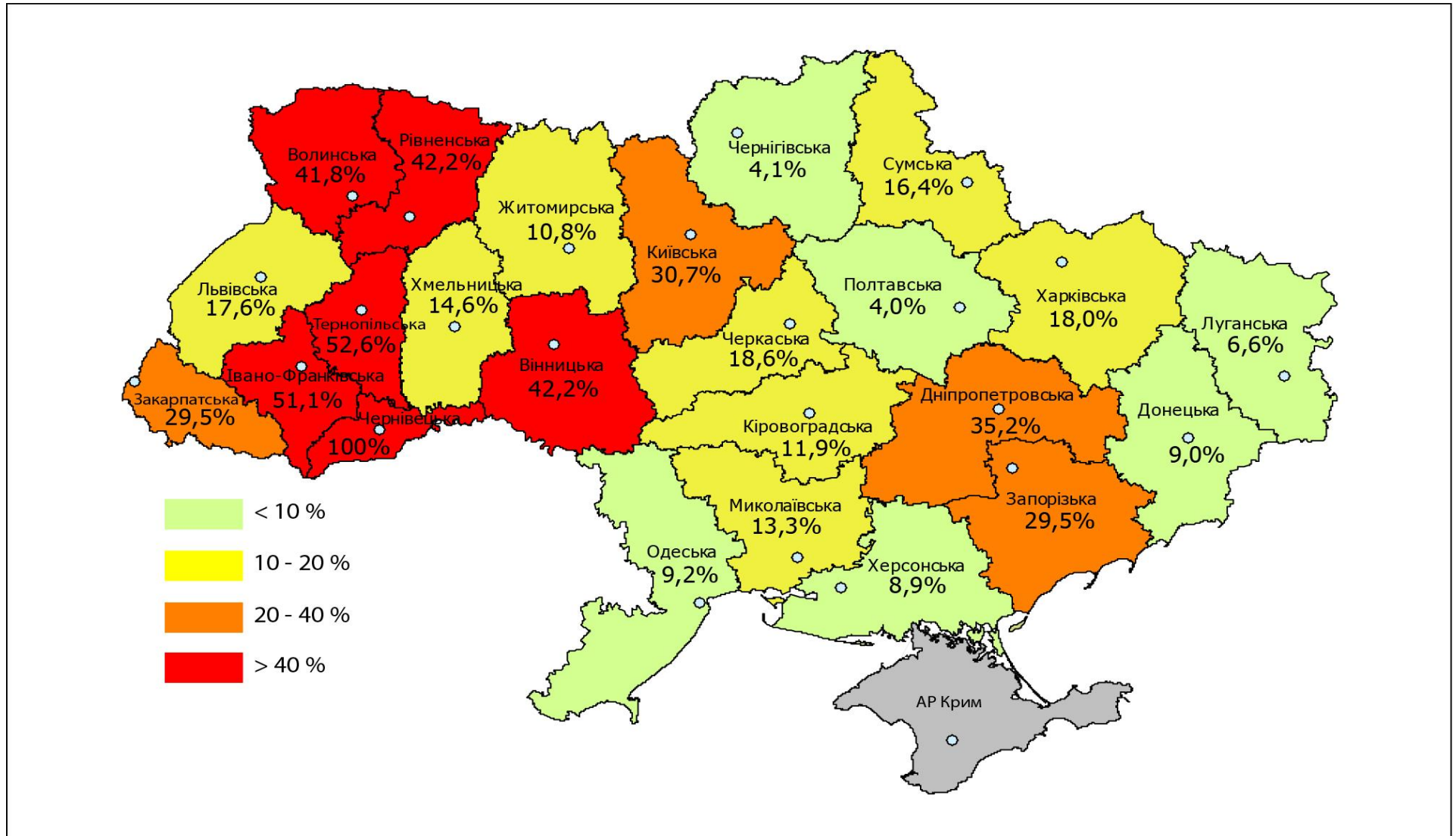


Fig. 3. The percent of agricultural lands of state property's where were inventory was made, in the structure of land region

Conclusions

1. The analysis of the cadastral information system of foreign countries allows to conclude what is common in cadastral information systems, and what are significant differences in the understanding of the land cadastre, its organizational structure and methods of implementation.
2. Inventory is an effective way to ensure the relevance and reliability of the state land cadastre data, land parcels used in various respects by their authorized subjects.
3. Implementation of the inventory of land in Ukraine will help to replenish and update information database for the cadastre. This will allow to transfer the State Land Cadastre data about land, details of which are missing in the state land cadastre, and registered documents of title to land.
4. Ukraine needs to speed up the the inventory of agricultural land. This will help fill in the National Cadastral System of Ukraine to complete the land reform and activate land market.
5. Inventory process for certain arrays of land parcels as a form of continuous inspection of properties (attributes) of the objects of property must be the result of feeling the need of land relations. This primarily refers to the local communities. This approach not only facilitates solving the problem of funding, but also will ensure efficient use of the funds ensuring the implementation of the principle of sufficiency when forming the database of the State Land Cadastre.
6. Techniques and components of inventory process are subject to improvement based on technology of land information systems. It takes into account the characteristics of each object of property through the use of advanced survey methods and descriptions that provide inventory data corresponding to their physical characteristics and use.
7. The state should provide adequate quality control of surveying and mapping procedures. The greatest economic impact at the state level and at the local government level can only be achieved with consistent work on the inventory process routine from the initial level - from a land user data to the overall - national system – the state land cadastre.

References

1. Bardash S.V. (1999) „Inventoryzaciya: teoriya, praktyka, komputeryzaciya”, Zhytomyr: ZhITI, – 372 s. (in Ukraine).
2. Demyanenko M.Ya. and Chudovec V.V. (2008) Inventoryzatsiya v systemi bukhhalters'koho obliku: monografiya, Kyiv, NNC IAE, 288 s. (in Ukraine)
3. Dorosh O.S. (2015) „Inventoryzaciya zemel: metodychni pidxody do yiyi provedennya” // Elektronnyj resurs: Agrosvit, № 11, available at: http://www.agrosvit.info/pdf/11_2015/5.pdf. (in Ukraine).
4. Kabinet Ministriv Ukrayiny (2012), Postanova Kabinetu Ministriv Ukrayiny „Pro zatverdzhennya poryadku provedennya inventoryzaciyi zemel”, available at: <http://zakon3.rada.gov.ua/laws/show/513-2012-%D0%BF> (in Ukraine).
5. Kalyuzhny M.N. and Dorosh Y.M. (2011), „Naukovo-metodychni zasady inventoryzaciyi zemel silskogospodarskogo pryznachennya”, Zemlevporyadny visnik, vol.6, pp. 29-31 (in Ukraine).
6. Larsson G. (1991). Land Registration and Cadastral Systems. New York. 175 p.
7. Martyn A.G. (2011), „Inventoryzaciya zemel: yak yiyi zdijnyuvaty u suchasnyx umovax”, Zemelnyy soyuz Ukrainy, available at: http://zsu.org.ua/index.php/andrij_martin/91-2011-05-27-14-48-38 (in Ukraine).
8. Martyn, A.G. (2007), Pravovi problemy inventoryzaciyi zemel v Ukrayini, Zemleustrij i kadastr, № 3. – s. 17-21. (in Ukraine).
9. Pustovit L.O. (2000) Slovyk inshomovnyx sliv: 23000 sliv ta terminologichnyx slovospoluchen, Kyiv, „Dovira”, - 1017 s. (in Ukraine).
10. The Bogor Declaration United Nations Interregional Meeting of Experts on the Cadastre, p.2.7. Bogor, Indonesia, 18-22 March, 1996. – http://www.channelingreality.com/China/Bogor_Declaration.pdf.
11. Verkhovna Rada of Ukraine (2003), Zakon Ukrayiny „Pro zemleustrij”, available at: <http://zakon2.rada.gov.ua/laws/show/858-15> (in Ukraine).
12. Verkhovna Rada of Ukraine (2011), Zakon Ukrayiny „Pro derzhavnyj zemelnyj kadastr”, available at: <http://zakon5.rada.gov.ua/laws/show/3613-17> (in Ukraine).
13. Zayats V., Bavrovska N., Medynska N., Tyhenko O. (2016), Inventoryzaciya zemel yak instrument formuvannya Derzhavnogo zemelnogo kadastru: monografiya, Kyiv, „Medinform”, 280 s. (in Ukraine).

Information about authors

Nataliia Bavrovska, Ph.D. in Economics, Associate Professor, Department of Land Cadastre, Faculty of Land Management, National University of Life and Environmental Sciences, Ukraine, Kyiv 03040, Vasylykivska str., 17, natali_bavrovska@ukr.net

Olha Boryshkevych, Head of Educational Laboratory Department of Land Cadastre, Department of Land Cadastre, Faculty of Land Management, National University of Life and Environmental Sciences, Ukraine, Kyiv 03040, Vasylykivska str., 17, lopushenko@ukr.net