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LAND MANAGEMENT SYSTEMS IN THE REGION: ANALYSIS AND PRACTICE OF THE USE OF THE TERRITORIES OF THE COASTAL CITIES OF CHINA[1]

The relevance of the study of land management systems in the region is determined. The aim of the study is to determine the directions and features of the use of land management systems. To achieve this goal, the following tasks are solved: analyze existing land management systems; determine the directions and features of the formation and use of the land administration system; to identify the features of the formation of a land management system, taking into account the experience of mainland China and its coastal cities (Guangdong, Hong Kong, Macau). The analysis of modern land management systems is carried out and it is proposed to apply land administration at the regional level. As a result of the study, it was determined that the largest share in international practices is occupied by the characteristics: significant development of rental relations on a long-term basis (20 countries studied); the intended purpose of the land plot (19); taking into account the interests of stakeholders interacting in the field of land relations (19); taking into account the functional features of the land (19); the permanent use of cadastral information (18); the development of the land administration system (16); formation of the ecological balance of territories (11).

It has been determined that land management in mainland China is characterized by the prevalence of their use in agriculture, where large farms operate. However, in coastal cities, for example, Guangdong, Hong Kong, and Macau, the peculiarities of land management are a significant amount of their use in the logistics and trade infrastructure, industrial production with agricultural development opportunities. In addition, free trade zones, where modern land management systems are created, are important for the development of land relations.

Key words: *land management systems, region, land administration, land use experience in coastal cities of China.*

Introduction. In the context of globalization processes, an increase in the population of the Earth, significant imbalances that arise between countries increases the importance of land resources that ensure regional development. Modern land management systems aimed at improving the efficiency of their use, taking into account regional characteristics. However, those presented to the system are not always used, which impedes the territorial development of countries. In this context, to solve the problematic aspects of land use, the implementation of the land administration system is of particular importance. In addition, the experience of the formation of land relations in coastal cities (Guangdong, Hong Kong, Macau), where modern technologies of territorial development are applied, is noteworthy. Thus, the study of the current land management systems in the region is relevant.

Analysis of existing research. The results of the study of areas and features of land management, taking into account regional characteristics, are presented in the developments [1–10]. However, the questions of determining the directions and features

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of the application of modern land management systems in the region remain unresolved.

The aim of the study is to determine the directions and features of the use of land management systems.

Research objectives. To achieve this goal, the following tasks are solved:

− analyze existing land management systems;

− determine the directions and features of the formation and use of the land administration system;

− to identify the features of the formation of a land management system, taking into account the experience of mainland China and its coastal cities (Guangdong, Hong Kong, Macau).

Main part. In modern conditions, various land management systems are used:

− classical (France, Germany, Austria, Italy, Spain): it is formed on the basis of the implementation of the "general to private" principle, where general principles are developed and state measures are taken to create a land management system, implemented on specific land plots, and the quality of agricultural land is determined crop yields on arable land and forage land productivity [7]. It allows you to determine the main directions of the formation and implementation of land management, to build a unified system where changes occur "from top to bottom". The disadvantage of the classical system is the significant influence of government on the formation and implementation of land policy, the complexity of its implementation, in particular, given the need for their implementation at the level of specific land management;

− transitional (USA, Australia, Canada): it is determined by focusing on the formation and use of a specific land plot, the assessment of its spatial parameters, the principle of "private to general" has been implemented [7]. It takes into account the directions and characteristics of land use at the level of the land plot, allows for specific changes that affect the formation of national policies. However, there are certain problems in determining and accounting for territorial, economic, environmental and social requirements [2];

− complex multifunctional (Sweden, Finland, Latvia, Lithuania, Estonia, Netherlands): aimed at creating a multi-purpose cadaster, the formation and use of which is carried out by applying geographic information and navigation systems, takes into account changes occurring at different levels of land use, where interaction between infrastructure of a multifunctional land management system, spatial data infrastructure, spatial activity information and state, municipal and privatized reporting sectors [2]. It allows you to build a unified system of state management of land relations, given the multifunctionality of the interaction of spatial data, the structure of land relations, the interaction of various groups of stakeholders using modern geographic information and navigation systems. The disadvantage of this system is the complexity of its formation and use, the need to improve the system of spatial and information support.

Presented land management systems in developed countries are being transformed into a modern integrated land administration system. The presented system allows for the interaction between the functions of land administration: land ownership, assessment, use, development of land. In this context, land relations management is ensured, taking into account the peculiarities of land ownership, use and development, and the results of their assessment. So, the principle of multifunctionality of land relations at all levels of land management is being decided.

The land administration system is defined as one area of the land plot, real estate, the amount of space, air above the surface, everything that is under and near the object.

In the context of the definition of land administration, the point of view presented in [4] deserves attention. It is characterized as "processes related to land ownership, land value, land use and land development, carried out by the government (power) using public or private sector institutions". The land administration system includes:

− institutional arrangements;

− regulatory framework;

− processes, standards, land information;

− management and dissemination of systems and technologies necessary to support distribution, land markets, assessment, management of the use and development of interests in land [4].

The system of land administration is based on a set of international regulatory documents:

1) land administration guidelines: with special reference to countries in transition;

2) United Nations-FIG Bathurst Declaration on Land Administration for Sustainable Development;

3) land administration in the UNECE region;

4) land administration for sustainable development;

5) ISO 19152: 2012 Geographic information;

6) INSPIRE. D2.8.I.6 Data on Specifications Cadastral Parcels [5–10].

The implementation of the integrated land administration system in Ukraine, according to experts, is determined by the problematic aspects that are

associated with: the lack of a common system in the management of land relations and the use of land resources; departmental fragmentation of structures whose activities are related to land information; each structure collects the data it needs; separate maintenance of land and urban development cadasters and a register of rights to real estate, which complicates the development of a unified land policy, the processes of preparing common decisions and the provision of services, duplication of data; unsystematic, unrelated separate solutions to issues of ownership, assessment, use, development of land by various organizational structures; the limited use of modern information technologies, including geographic information technologies, creates obstacles to the implementation of a unified policy and the interconnected effective work of departments, services and users [4].

To implement the integrated system of land administration in international practices, geographic information systems are used, it is a comprehensive toolkit that allows analysis, taking into account the spatial, urban, investment and environmental features of land ownership, assessment, use and development of land.

The development of the land administration system is associated with the determination of land ownership. In Western countries, private property, or simply property, is called the free, unlimited right to use a thing. For land, unlimited right is as follows: personal use of land; transfer of the right to use to another person free of charge or for a fee (rent); inheritance of land; sale or pledge of land. This form of ownership is valid for commodities produced and used by a person.

In the regulatory framework of Western European countries, a balance is required between the rights of the owner and the requirements expressing a common interest in the organization of space. This balance between the rights of the owner and the requirements of taking into account common interests is of particular importance in the territorial development of the regions.

In most European countries, private ownership of land is developed. In countries such as Sweden, Germany, France, Italy, Denmark at the present stage, in particular, 35–65% of urban land is privately owned [1]. In Spain, almost all land is privately owned [11]. Earth in the center. London is sold inactive, because almost all of it is privately owned [12]. In the city of Montreal – 95% of the land is private [3]. Along with this, in Israel 93% of the land belongs to the state, and the remaining 7% – to foreign embassies and institutions of various religious denominations, this is a sign that there is no private ownership of land [13]. In China, all land is state property.

Describing the system of property relations, it should be noted that in the United States – the younger the state since its inception, the higher the share of federal land ownership in cities [14].

The system of state and municipal government in Sweden, Germany, France, Italy, Denmark, Spain and the United States, defines, basically, a two-level system of regulation of land circulation on the basis of state and local laws.

Land law at the national level regulates the basic provisions of the rights and obligations of land owners, as well as the powers of municipalities and districts on relations with owners and control over the use of urban land. Regional or municipal law governs taxation and land use. Municipal authorities, as a rule, have a wide range of rights and opportunities to manage land resources, including the regulation of the tax base, zoning of the territory, by types of permitted use, and control over the intended use of these lands.

Characterizing the presented system, the most decentralized is the land administration of France, where each municipality and city department builds its own real estate management procedure, owns and manages property. This system is considered effective, but it has led to corruption. In the 90s, the "Sapin Law" was adopted, which is aimed at preventing corruption and ensuring transparency in economic and public administration [15].

Cities of Switzerland are seen as an example of efficient land use. State-owned real estate is divided into administrative and financial.

In Canberra (Australia) and Hong Kong, all land is owned by city authorities. Moreover, in these cities there is a free market for the right to long-term lease of land (99 and 50 years, respectively). Long-term lease of land provides for the automatic extension of the contract, or the preemptive right of the present tenant to extend the lease term. Land lease rights are freely bought and sold and can be used as collateral for a mortgage loan. The state may transfer the rights to use, develop, inherit, transfer and receive benefits from land to private individuals and legal entities [15]. Thus, the relationship between the land lessor (state) and the tenant (physical) corresponds to the relationship between the state and the land owner.

In Finland and Israel, land is owned by the city and leased. However, the functions of urban planning and management of land leases are independent of one character. The planning department determines the possibilities for changing the intended use of land, and the management department holds tenders for the right to conclude lease agreements. The purpose of this separation of functions is to exclude the possibility

of a department (company) that leases or sells land to influence the decision of the planning committee.

In Canberra, due to a lack of specialists in efficient land management, it was proposed to create a quasi-state or private company that would be relatively independent and manage state lands. Moreover, she obeyed the law as another private investor [16].

The generalization of international experience in the application of the land administration system indicates the development of institutional and regulatory areas for the protection of land rights, their use. Moreover, the development of rental relations is of particular importance, especially for the development of urban areas of the regions. It is proved that rental relations in the field of land use most fully meets the interests of interested parties and contributes to the development of territories, especially in the settlements of the regions.

To ensure the territorial development of the use of land in the regions, the solution of problematic issues related to the justification of the categorical apparatus for the definition of the terms "land" and "real estate" is of particular importance.

In international practice, real estate is considered as a single integrated concept, including land, real estate, everything that is located on, under, above, next to the land. This approach allows us to develop a unified approach to the formation, allocation, assessment, use and development of land, creates the conditions for the introduction of a land administration system for their use, and solves a complex of institutional problems associated with the formation of a unified system of land relations management.

Summarizing the foregoing, the dissertation defines the characteristics that determine the territorial development of land use in the international practice of developed countries (Table 1).

Thus, as a result of the study, it was found that the largest share in international practices is occupied by the characteristics:

− significant development of long-term rental relations (20 countries studied: Germany, the Netherlands, Great Britain, Italy, Israel, China, Bulgaria, Luxembourg, France, Portugal, the USA, Denmark, Argentina, Belgium, Spain, Norway, Sweden, Switzerland, Australia, Finland);

− intended purpose of the land plot (19 – Germany, the Netherlands, Great Britain, Italy, Israel, Bulgaria, Luxembourg, France, Portugal, the USA, Denmark, Argentina, Belgium, Spain, Norway, Sweden, Switzerland, Australia, Finland);

− taking into account the interests of stakeholders interacting in the field of land relations (19 – Germany, the Netherlands, Great Britain, Italy, Israel, China, Bulgaria, Luxembourg, France, Portugal, the USA, Denmark, Argentina, Belgium, Spain, Norway, Sweden, Switzerland, Australia, Finland);

− taking into account the functional features of the land (19 – Germany, the Netherlands, Great Britain, Italy, Israel, China, Bulgaria, Luxembourg, France, Portugal, the USA, Denmark, Argentina, Belgium, Spain, Norway, Sweden, Switzerland, Australia, Finland);

− permanent use of cadastral information (18 – Germany, the Netherlands, Great Britain, Italy, Israel, China, Luxembourg, France, Portugal, the USA, Denmark, Belgium, Spain, Norway, Sweden, Switzerland, Australia, Finland);

− development of a land administration system (16 – Germany, the Netherlands, Great Britain, Italy, Israel, Luxembourg, France, Portugal, the USA, Denmark, Belgium, Spain, Norway, Sweden, Switzerland, Finland);

− formation of the ecological balance of territories (11 – Germany, the Netherlands, Great Britain, Italy, France, Belgium, Spain, Norway, Sweden, Switzerland, Finland).

Along with this, at a low or mediocre level, the following are taken into account:

− systematic accounting of agroclimatic features of land (1 – United Kingdom)

− determination of hemorphological features of land (1 – France)

− systematic formation of areas of economic valuation of land (2 – United Kingdom, the USA);

− development of 3D cadaster (5 – the Netherlands, Israel, Denmark, Norway, Sweden);

− significant influence of state authorities (6 – the Netherlands, Great Britain, Israel, China, Australia, Finland);

− a high level of agricultural land attraction in the sphere of rental relations (8 – Germany, the Netherlands, Great Britain, Italy, France, the USA, Denmark, Australia).

It should be noted that when considering the land relations management system in China, it was determined that it occupies one of the leading places in terms of arable land – 92 500 000 Ha or 9.9% of the total land fund. Most of the land fund is in state ownership, the management of which is aimed at improving the efficiency of its use and is carried out at the national, regional and local levels. Land administration of China is implemented by the Ministry of Land and Natural Resources, which includes various structural units: the State Bureau of Land Monitoring, the State Geodetic Administration, the State Marine

Table 1

Characteristics that determine the territorial development of land use in the international practice of countries (developed by the author)

Country	Formation of the ecological balance of territories	Significant government influence	Land purpose accounting	Taking into account the interests of stakeholders interacting in the field of land relations	Significant development of long-term rental relationships	High level of attraction of agricultural land in the field of rental relations	Systemic formation of areas of economic valuation of land	Systematic accounting of agroclimatic features of land	Determination of hemorphological features of land	Consideration of the functional features of the land	Permanent application of cadastral information	3D cadaster development	Development of a land administration system
	+		+	+	+	+				+	+		+
	+	+	+	+	+	+				+	+	+	+
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		+	+	+	+					+	+	+	+
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	+	+	+	+	+					+	+		+
Total	11	6	19	19	20	8	2	1	1	19	18	5	16

Administration, and the State Administration for Land Supervision [17].

In China, the land code has not been developed, it affects the management of land resources, but their coding is carried out [18]. Therefore, the development and implementation of a land administration system for the formation of a geographic information system is of particular importance, taking into account the peculiarities of land relations in China.

In accordance with the Law of China "On Land Management" it is determined that the owners of agricultural land are agricultural production cooperatives and other collective economic organizations [17]. However, the importance of small units operating in the field of land relations is decreasing. It is also a limiting factor for farmers to invest.

Unlike mainland China, Hong Kong has more open economic relations, affects the provision of land management. Features of this process is the emergence in the territory of coastal cities (including Hong Kong), bonds of zones and territories, which have a high level of investment attractiveness. In general, coastal areas include eleven administrative units, occupying 1 297 thousand square meters. km., where 435 million citizens live. Most of the employed population works in agriculture. However, the share of the employed population in industrial activity is growing.

Land administration of coastal cities (Guangdong –Hong Kong – Macau) is aimed at developing trade relations with the formation of modern transport and logistics centers [19]. A feature of land management, in particular the territory of Guangdong, is the creation of the Guangdong Free Trade Zone (GDFTZ), the functioning of which is aimed at:

− the creation of an international, market-oriented and regulated business environment based on pilot reforms from three to five years;

− the establishment of a new and open economic system to deepen Guangdong – Hong Kong – Macau cooperation;

− the creation of new advantages in international economic cooperation;

− the creation of a free trade park with a regulated environment that meets high international standards to attract investment and promotes trade, provides a safe and highly efficient use of land resources [20].

Conclusions. As a result of the study, an analysis of modern land management systems was carried out and land administration was proposed at the regional level. It was determined that land management in mainland China is characterized by the prevalence of their use in agriculture, where large farms operate. However, in coastal cities, for example, Guangdong, Hong Kong, and Macau, the peculiarities of land management are a significant amount of their use in the logistics and trade infrastructure, industrial production with agricultural development opportunities. In addition, free trade zones, where modern land management systems are created, are important for the development of land relations.

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Вень МінМін, Мамонов К.А., Фролов В.О. СИСТЕМИ УПРАВЛІННЯ ЗЕМЕЛЬНИМИ РЕСУРСАМИ РЕГІОНУ: АНАЛІЗ ТА ПРАКТИКА ЗАСТОСУВАННЯ ТЕРИТОРІЙ ПРИМОРСЬКИХ МІСТ КИТАЮ

Визначено актуальність дослідження систем управління земельними ресурсами регіону. Метою дослідження є опрацювання напрямів й особливостей використання систем управління земельними ресурсами. Для досягнення поставленої мети розв'язуються наступні завдання: проаналізувати існуючи системи управління земельними ресурсами; визначити напрями й особливості формування та використання системи земельного адміністрування; виявити особливості формування системи управління земельними ресурсами, враховуючи досвід материкового Китаю та його приморських міст (Гуандун, Гонконг, Макао). Проведено аналіз сучасних систем управління земельними ресурсами й запропоновано на регіональному рівні застосовувати земельне адміністрування. У результаті дослідження визначено, що найбільшу питому вагу в міжнародних практиках займають наступні характеристики: значний розвиток орендних відносин на довгостроковій основі (20 досліджених країн); цільове призначення земельної ділянки (19); врахування інтересів стейкхолдерів, що взаємодіють у сфері земельних відносин (19); врахування функціональних особливостей земель (19); перманентне застосування кадастрової інформації (18); розвиток системи земельного адміністрування (16); формування екологічного балансу територій (11).

Визначено, що управління земельними ресурсами в материковому Китаї характеризується превалюванням їхнього використання в сільському господарстві, де функціонують великі господарства. Проте в приморських містах, наприклад у Гуандун, Гонконзі, Макао особливостями управління земельними ресурсами є значний обсяг їхнього використання під логістично-торговельною інфраструктурою, промисловим виробництвом із можливостями розвитку сільського господарства. Крім того, важливого значення для розвитку земельних відносин мають вільні зони торгівлі, де створюються сучасні системи управління земельними ресурсами.

Ключові слова: *системи управління земельними ресурсами, регіон, земельне адміністрування, досвід використання земельних ресурсів приморських міст Китаю.*