

# Organizational basis of the development of system of land planning design

## Base organizativa para el desarrollo del sistema de ordenamiento territorial

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### Abstract

The modern role of land management design in organizing the rational use of land and other real estate, managing the land and property complex requires the development of new scientific approaches to improve the design process on a sound organizational basis. The aim of the work is the substantiation of the author's proposals for creating the organizational basis for the development of land planning system. Also, the aim of the work is to offer practical recommendations on the development of industrial practice of design land management. To this end, the author solves the problems of substantiating the structure and stages of the organizational system for the development of land management design, substantiating a set of measures to improve and eliminate design flaws, establishing priority areas for the development of land management design. Creation of an organizational basis for the development of land planning system requires the implementation of measures in conjunction. Activities should cover such organizational stages as: administration, provision, incentive, implementation, control and adjustment. On this basis, the systemic shortcomings of design production are eliminated and the practice of land management in the country is improved.

**key words:** organization, land management, land management design, organizational basis, system of land planning.

### Resumen

El moderno papel del diseño de gestión en la organización del uso racional de la tierra y otros bienes inmuebles requiere el desarrollo de nuevos enfoques científicos para mejorar el proceso de diseño sobre una base organizativa sólida. El objetivo del trabajo es fundamentar las propuestas del autor para crear las bases organizativas para el desarrollo del sistema de planificación de la tierra y ofrecer recomendaciones prácticas sobre el desarrollo de la práctica industrial del diseño de la gestión de la tierra. Con este fin, el autor resuelve los problemas de corroborar la estructura y las etapas del sistema organizativo para el desarrollo del diseño de gestión de la tierra, corroborando un conjunto de medidas para mejorar y eliminar defectos de diseño, estableciendo áreas prioritarias para el desarrollo del diseño de gestión de la tierra. La creación de una base organizativa para el desarrollo del sistema de planificación de la tierra requiere la implementación de medidas en conjunto. Las actividades deben cubrir etapas organizacionales tales como: administración, provisión, incentivo, implementación, control y ajuste. Sobre esta base, se eliminan las deficiencias sistémicas de la producción del diseño y se mejora la práctica de la gestión de la tierra en el país.

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**Palabras clave:** organización, gestión de la tierra, diseño de gestión de la tierra, base organizativa, sistema de planificación de la tierra.

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## 1. Introduction

Assessment of the state of modern Russian land use indicates multiple problems in the land balance of the country. The main problem can be considered the progressive destruction of the land and property complex of the agricultural sphere of economic activity. Over the decade, the area of agricultural land decreased from 401.6 million hectares to 383.7 million hectares (17.9 million hectares). Over the past quarter century, the area of degraded sites has grown by almost 24 million hectares, other negative processes on the ground are developing intensively (Khlystun, 2018, P. 11-18).

In addition to the physical reduction of the land-property complex of agricultural production, economic and social problems in land use are also sharply manifested. Rights to land property are insufficiently specified and protected, which determines the instability of the land balance. Deficiencies in land registration cadastral procedures lead to disputes over land ownership, illegal seizure of land property, imposition of the boundaries of some complexes on others, inaccuracy of information about the tax base, limitation of public rights to access natural objects, growth of social tension in society, loss of social sense equity in land relations, an increase in the number of conflicts over the ownership and use of land property owls.

This negatively affects the development of the economy, does not allow to organize the rational use of land property, reduces the profitability of real estate and the investment attractiveness of land property. In such conditions, the land loses its value, ceases to be a reliable object of financial investments, loses its functions in the development of complex economic systems. People cease to value land, treat it with care, evaluate it as highly profitable and liquid property, maintain and rationally use land property.

The main reason for this should be considered the departure of the Russian state from the management of land property, which began at the end of the last century (Volkov, 2015, 6-12). Today, the state has completely disappeared from this process, and the land administration system has been practically destroyed. The most important management functions require reconstructing and restructuring: studying and mapping territories, developing scenarios and forecasts for the use of land property complexes, maintaining an effective cadastre (including soil surveys and soil appraisal works), an economically sound system for ensuring land use paid, land management as a system for organizing rational use land property, the implementation of comprehensive supervision of the use of land and assessing the quality of standing land and property complexes.

Land management in the analyzed management system should serve as the most important tool for the implementation of state and public interests in the field of property relations. Implementation of land management organizational and territorial provisions directly on the ground is carried out by transferring land management projects in kind. The latter serve as the result of the land management design process and ensure on-site implementation of the rules for the rational use of land within the property complex of a certain area, exact location, with fixed boundaries.

The role of land management design is very significant in organizing the rational use of real estate and managing the land and property complex. In this regard, the development of new scientific approaches to improving the design process on a sound organizational basis is required, which determines the author's interest in the stated problem.

The aim of the work is to substantiate the author's proposals for creating the organizational basis for the development of land management planning, as well as practical recommendations for the development of organizational and territorial design practices.

To achieve this goal, the author will solve the following problems: substantiation of the structure and stages of the organizational system for the development of land management design, assessment of the current state of the design system, substantiation of a set of measures to improve land management design, establishing priority areas for the development of land management design. The solution of these problems and the achievement of the stated goal of the work requires research using a complex of methodological techniques and general scientific methods.

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## 2. Methodology

Assessment of current trends in the development of the land and property complex and analysis of the state of practice of land management design are made on the basis of analytical and statistical research methods. The development of constructive proposals for organizing the development of a land management system and establishing priority measures to improve design practices is based on the monographic method of scientific research (analytical and critical review of the literature). This methodological technique based on logical modeling provides the validity and comprehensiveness of the solution of the research scientific problem.

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## 3. Results

Inadequate regulation of land and property relations in the country led and leads to tension in the land balance. Special problems in this case are manifested in relation to land property engaged in the production of agricultural products (Volkov, 2015, 6-12). Over twenty years, 41.5 million hectares of land have left the agricultural turnover, which makes up almost 11% of all agricultural land. Against the background of a reduction in highly productive land, the area of the deposit reached 5 million hectares (1.3% of agricultural land). The area of degraded land plots annually grows by 2.4 million hectares (0.6% of agricultural land) (Volkov, 2015, 6-12).

The situation in the land and property sphere determines the particular relevance of restoring the country's full practice of land management design in order to organize the rational use of land property. This process is not simple and requires a lot of time, financial resources, labor costs, serious organizational and economic studies, changes in land and property policies, involving all participants in land and property relations in this process, and understanding in society the need to improve the practice of organizational and territorial design.

In the process of creating the organizational basis for the development of the land management planning system, the author identifies such stages as: administration, maintenance, stimulation, implementation, control and adjustment (table 1).

At the administration stage, the necessary regulatory, institutional, organizational and administrative conditions for the prospective development of the domestic system of land management design should be created. Activities at this stage depend mainly on a government-level initiative (federal legislative and executive bodies).

The main task of organizational actions at the support stage should be considered to achieve a balance between the target function of the development of the land management system and the resources necessary for this. Activities of this stage are implemented mainly at the regional level, subject to the coordination of federal level.

At the incentive stage, the economic interest of all participants in land-property relations in the development of the system of organizational and territorial design is ensured. This objective is achieved by encouraging bona fide and punishing dishonest economic entities at the regional and local levels.

The implementation stage provides the conditions for the production of scientifically based design land management products and the implementation of land management projects in practice. Activities at this organizational stage are at the regional and local levels.

**Table 1**  
Organizational basis of the development of system of land planning design

Organizational stage	Set of events	Event Performance
1. Administration	1. Development and implementation of legal standards for the development of land management design. 2. The creation of a single state center for land management design. 3. The establishment of land management institutions in the regions of the country.	1. Providing a regulatory framework for the development of land management design. 2. Institutional and organizational and administrative support for the development of land management design.
2. Provision	1. Establishing sources of financing for project activities and determining the budgets of design land management organizations. 2. Recruitment (if necessary - training) of qualified engineers - designers in land management. 3. Technological equipment of project land management production, appropriate material supply.	1. Resource support for the development of land management system design. 2. Ensuring a balance between the tasks of the development of organizational and territorial design and the necessary resources for this.
3. Stimulation	1. Encouragement of economic entities for the use of land property on the basis of land management projects 2. Punishment of economic entities for the use of land without the recommendations of land management projects.	1. Ensuring the economic interest of participants in land-property relations in the development of land management planning system.
4. Implementation	1. Development and justification of land management projects. 2. Coordination and approval of organizational and territorial design documentation. 3. Implementation of design developments directly on a specific territory. 4. Securing design land management elements on the ground.	1. Providing conditions for the production of scientifically based design products of land management. 2. Providing conditions for the implementation of the provisions of the project land management documentation in practice.
5. Control and adjustment	1. Control by design institutions for the implementation of the results of land management design. 2. The introduction of objectively necessary changes to the composition of design land management documents.	1. Ensuring the connection between the design process and the implementation of land management projects. 2. Providing the ability to adjust the provisions of land management projects.

The process of developing land management design logically ends at the organizational stage of control and adjustment. At this stage, direct and feedback between the production process of design and implementation of

land management projects is provided. In addition, at this stage, it is possible to adjust, if necessary, certain provisions of land management projects. Activities at this stage are implemented mainly at the local level.

The result of the complex of measures taken is the creation of organizational and economic prerequisites for improving the land management system in the country and establishing the main directions for the development of production practices for the future.

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## 4. Discussion

The land is a unique and scarce resource, its effective use requires constant and targeted participation of the state in the sphere of land and property relations. The weakening of federal land management leads to ignoring the strategic role of land in the long-term development of the country, and often works for the personal enrichment of individual subjects of land relations (Komov, 2017, 5-11).

Federal land use management is necessary for accounting and ensuring public, state, national interests in the field of land use. Today, such a management system is absent in the country, which affects the state of the entire management sphere and its individual functions, including land management, through which the rational use of land and property complexes is organized and the territory is rationally organized. These goals are ensured by land management design, the result of which is a system of land management projects containing the solution and justification of individual design tasks (territorial, on-farm, workers).

In modern legal norms there is no concept of land management design as a system for creating scientifically sound design land management products, on the basis of which the state should realize its interests in organizing the territory for various economic, commercial and other purposes (Zemel'nyj kodeks Rossijskoj Federacii, 2019).

The system of a single land management production, ensuring the development of land management projects, is absent in the country. Without these projects, it is impossible to organize the rational use of land and ensure the rational organization of the territory.

Actual scientific developments on the organization of project production and development of land management design practices are not enough. These provisions make it necessary to study the main problems of land management design and determine the directions of its development.

The basic problems of domestic land management design are associated with many systemic problems, including the lack of a land-saving policy in the country and the destruction of the state's land-property complex management system.

Today in the country the once-integral and effective system of project land management is completely destroyed. State design agencies for land management are liquidated, and private organizations cannot organize full-fledged design production. There is no single administrative and economic management system for project land management. This leads to a loss of unification of requirements for the composition and content of land management projects in different regions of the country, the loss of the principle of mandatory implementation of project provisions, and a decrease in land use stability. In many regions there are no organizations that carry out a full range of design land development projects and produce special organizational and territorial products. There is practically no budget project production in the country, and initiative land management production is devoid of system and unity. This negatively affects the state of the land market in the country (Bryzhko, 19, 9), the development of land and property relations.

The practice of developing complex projects of territorial land management of separate administrative-territorial formations is destroyed, also like practice of developing other projects, such as projects to create rational land use and land tenure systems, projects to streamline the territory and eliminate spatial shortcomings of land use,

projects of on-farm land management of the territory of agricultural producers, land development and improvement projects, projects of anti-erosion organization of the territory, organization projects use of contaminated aground, conservation and restoration of degraded land projects, agricultural land improvement projects, other land management projects.

There is a simplification to the primitivism of the process of land management design. The result of this process are design elements that are not tied to the terrain (defined in conditional systems). This leads to the imposition of design boundaries, the emergence of disputes between individual land users regarding the ownership of land property, corruption risks, instability of land ownership, additional costs for the specification and protection of land property.

As a result of the ongoing negative processes, there has been a loss of experience and traditions in the practice of land management design. The old practice does not meet the new conditions, the new practice is absent. Qualified design specialists have been lost, new specialists have no one to learn practical experience from, and the lack of project land management prevents the independent development of practical skills.

The severity of the aforementioned problems is intensified by the lack of understanding in society and in the government of the need to restore the land management system in the country as the basis for ensuring the rational organization of the territory and rational land use.

The analysis conducted by the author allows us to note that the land management system over the years of development of market relations has undergone a significant transformation. Design institutions in land management that had a single centralized public administration system were liquidated. This led to the loss of unification of the process of organizational and territorial design, a decrease in the quality of specialized design products, the uniqueness of standard design procedures, and, consequently, an increase in financial costs for developing land management projects. Whole types of design documentation have disappeared from the unified system of land management design. (Bryzhko, 2019, 131-133).

The development of the economy in market conditions requires well-known measures for the analysis and regulation of land use (Cheshire, 2004, 619-637). On this basis, it is possible to connect the land market with the population and finances; this requires taking into account the forms and rules of land use (Jaeger, 2013, 966-973). This cannot be done without a territorial organization system.

In these conditions, the problem of improving the production practice of land management design acquires important scientific and practical importance.

According to the author, for the integrated development of the land management system required actions in the following areas:

1. Development of a general conceptual approach to the restoration of project land management systems in the country, with the implementation of relevant regulatory and institutional requirements. The need for development exists in all Russian regions.
2. Reconstruction of project land management production in the country, managed and coordinated from a single federal center (for this we need an administrative and organizational structure corresponding to the tasks of developing land management design). Creation of design land management institutions in each state entity.
3. Updating the methods and techniques of land management design, the composition of modern design land management tasks, the content and sequence of solving the basic design problems of land management (territorial, on-farm, precinct). Given the many years of interruption in the design of land management, this task is mandatory.

4. Technological, instrumental, computer support of the restored and updated land management design. Modern tools, machinery, equipment are needed; computer tools and technologies, packages of adapted application programs; computer-aided land management systems. The implementation of this direction will reduce the cost of labor for design, facilitate the work of designers, improve the quality of land management design.

5. Development of the theory and methodological principles of land management planning taking into account the changed institutional and economic conditions. Here we need research on all types of design and pre-design tasks of land management, on all stages and stages of the project land management process (from preparation to implementation of project documents). Theoretical research is needed on the organization of design land management, rationing and remuneration of designers. Along with this, the development of the theory and methodology of the general land management system is required.

6. The staffing of the updated land management planning meeting modern requirements. This requires the adjustment of federal educational standards and work programs of special subjects in higher educational institutions, an increase in the volume of laboratory studies and design workshops to master the methodology for solving the main design problems of land management with their comprehensive (economic, environmental, social, organizational, legal, technical) justification.

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## 5. Conclusions

The problem of restoring in the country the industrial practice of land management design in order to organize the rational use of land property is becoming particularly relevant today. This process requires appropriate organizational and economic support.

Creation of the organizational basis for improving land management planning in the country should be carried out at such stages as administration, maintenance, stimulation, implementation, control and adjustment. As a result of the implementation of the complex of measures at these organizational stages, such results should be achieved as: ensuring the normative, institutional, organizational and administrative basis of the organizational and territorial design; Resource support for project land management production, taking into account the promising tasks of its development; ensuring, with the help of special incentives, the economic interest of subjects of land and property relations in the development of the system of land management design; providing conditions for the production and sale of project land management products; providing the ability to control the sale of project land management products and adjust the basic design provisions.

As a result, organizational and economic prerequisites will be created for the development of the land planning system.

In order to eliminate shortcomings in project production and development of modern land management practice, such measures are necessary as: development of a concept for the revival of organizational and territorial design practices, re-establishment of project land management production in the country, updating of methods, techniques, composition and sequence of land management design, technological and instrumental (including computer ) ensuring the process of land management design, the development of theoretical and methodological provisions of land management design, providing the design production process with qualified personnel.

The implementation of the author's proposals will ensure the conditions for the development of land management in the country, and other functions of land management, as well as the entire management system as a whole, this will help improve land use and rationalize land use.

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