Legal Security of Land Relations in the System of Sustainable Development

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ABSTRACT

The main purpose of the article is to form the provision of legal security in land relations in the system of sustainable development of the region. The object of the study is land relations in a particular region. The research methodology involves the use of modern multifunctional modeling techniques to better represent the elements of ensuring security in land relations in the system of sustainable development of the region. As a result, a detailed model range of stages for ensuring legal security in land relations in the system of sustainable development of the region was obtained. The novelty of the obtained results is revealed through the use of new techniques for modeling the process of ensuring legal security in land relations in the system of sustainable development of the region. The study has a limitation in the form of not taking into account the legal specifics of permanence for all regions. Subsequent studies should provide for the expansion of modeling to the scale of not only a single region, but also a country.

1. INTRODUCTION

The current stage of sustainable development is characterized by the need for the transition of the economic system to the principles of constancy. In this context, the need to develop a comprehensive program for the sustainable development of land relations is becoming more urgent, it requires the completion of land reform, the need to improve the mechanisms for the functioning of the credit and financial system to implement the tasks of land policy and ensure security. In addition, it requires efforts to create permanent conditions for the possibility of owning and disposing of land resources, the formation of environmental policy in society in the direction of legal security and land reproduction. The solution of these important problems requires, firstly, a new system of thinking and perception of the systematic nature of economic growth through a combination of environmental management, economic efficiency, social impact and security based on sustainable development.

Effective planning by public relations for the use of land resources due to the fact that land is the spatial basis for the placement of productive forces, the subject and means of labor, ensures the high competitiveness of the national economy at the global level. This is achieved through the improvement and sustainable development of technical and technological, environmental, legal, social aspects of land use by individual private owners in the regions. At the same time, the state, redistributing the added value through taxation, increases the level of welfare of society as a whole.

The problem of environmentally safe (sustainable) land use existed long before the beginning of the land reform. For a long time, the use of land in various sectors of the national economy was carried out without a clearly defined environmental, economic, legal and social justification. The issue of conservation, rational use and expanded reproduction of land resources as a basis for sustainable development has become especially acute.

The earth is the basis of human existence, which determines an important role in the process of sustainable development of society. As the basis of the ecosystem, tools and subject of production, the object of property rights is the basis of sustainable development, a condition for social progress and human well-being.

With the transition to market relations, the introduction of private ownership of land, land use conditions have changed dramatically. Science and practice faced the need for a balanced revision of the methodological foundations of land use and improvement of the mechanism for ensuring the legal security of land relations. The formation of a new methodology for sustainable development opens up the possibility of applying its results not only for the economic regulation of land relations, but also for organizing the rational use of land, defining and justifying a system of organizational and economic measures to restore their productivity.

The main purpose of the article is to form the provision of legal security in land relations in the system of sustainable development of the region. The object of the study is land relations in a particular region.

The structure of the article provides for a review of the literature on the selected topic, disclosure of the methods that form the research methodology, presentation of the main research results, discussion on the uniqueness of the results, conclusions and further research.
2. LITERATURE REVIEW

In the scientific and practical literature [1, 2], it has been repeatedly noted that land management is not effective without the creation of the necessary legal mechanisms for balanced land use, which includes specific tools for ensuring the conditions for sustainable development when using one of the main national wealth of a country - land. Land resources as a component of the country's natural resource potential is a unique object to which the interests of all members of society are directed, since land is a universal factor in social life support and sustainable development. The level of their use and reproduction is determined by the nature of the impact of economic entities on them. And it's hard to disagree with that.

More than once, scientists in the literature [3-5] raised the issue that the processes of land ownership and land use determine the nature of economic processes on the earth, which, in turn, determines the system of land relations. Land relations are singled out as a special socio-economic category not only because of the specifics of land as a unique object of common multi-purpose interests, but also due to the dual status of land, which acts in the reproduction process at the same time as a natural body, as a commodity, and as a socio-economic category, included in the system of commodity-money relations The prerequisite for the formation of a system of rational land use can only be a deep transformation of the relations of the economic structure of society - the relations of ownership of land. In the legal system of most regions of Europe, land relations should be singled out in a special block and in connection with the specifics of land as a kind of property category and a special type of real estate. At the same time, the basis of land relations is the form of land ownership.

Summarizing the opinion presented in the scientific and practical literature [6-8], it can be argued that one of the most important tasks of the current stage of sustainable development of land relations and land reform is legislative and regulatory support and the full formation of the land market, without which one can hardly hope for positive shifts towards the rational use and security of land resources. But it is necessary to begin to form the market with the transformation of public opinion, with the transformation of psychologically established views on land as an object of commodity-money relations. The peasant needs to understand that the land share, which he cannot fully cultivate for a number of objective and subjective reasons, must have an effective land user who takes into account public interests in the implementation of his goals.

Scientists often clarified in the literature [9-12] that the mechanism of sustainable development of land relations determines the legal levers and financial instruments for ensuring the development of the system of land relations at the national, regional and local levels in order to provide an economic justification for specific measures aimed at the rational use and reproduction of land resources. Legal incentive instruments are one of the most significant levers for encouraging land users to use and protect land resources efficiently. They are characterized by a system of measures of economic influence aimed at implementing the land policy of the state, ensuring the rights of landowners and land users, establishing socially fair payments for land, and economic incentives for rational and efficient land use.

Despite the great scientific attention in the literature to the problems of land relations, today it is still relevant to ensure their legal security in the system of sustainable development. That is why our article has weight and the right to exist.

3. METHODOLOGY

Legal security is highly dependent on the operation of information systems. If the system is faulty even for a short period of time, the region suffers significant losses, as well as losses due to debugging the faulty system. To reduce the risk of such situations, it is necessary to use the methods of modeling the processes of ensuring sustainable development, which make it possible to design an information system in the future, taking into account all the requirements and features of land relations. Such techniques will reduce unforeseen problems with ensuring sustainable development associated with the discrepancy between the information system and the characteristics of the region.

One such methodology is the Functional Job Modeling (SADT) methodology, which stands for Structural Analysis and Sustainability Design methodology. Using this method allows you to create a graphic description of the legal security of land relations, which is much more informative and complete than a description in natural language. It is the graphical representation that allows making important decisions related to the modeling and development of the future sustainable development information system. The main graphic modeling language is IDEF0 notation. It allows you to document the processes of ensuring sustainable development and display information about the use of resources at a particular stage of the system's functioning. To implement this model, the AllFusion Process Modeler environment can be chosen, which is a tool for creating models that allow you to analyze, document and plan for sustainable development. Before starting modeling, it is necessary to collect and analyze information about the subject area. This will allow the most accurate and complete formation of the overall model. The SADT functional model (aka IDEF0) reflects the general structure of processes and the links between them to ensure sustainable development, allows you to visualize the sequence of actions that make up any legal security process, the resources used, and the result obtained after the completion of the process. That is why it is necessary to first determine the main aspects of land relations in the region. As part of any IDEF0 notation model, there will be 2 main objects - blocks "Activity" (activity) and "Arrows" (arrows). The process is displayed as a rectangle (activity block), input and output data are displayed as arrows to the left and right of the process, respectively. From the borders of the diagrams, the arrows show the control actions Control, from the bottom of the borders to the processes, arrows are drawn, indicating the objects of the control Mechanism.

The use of the IDEF0 graphical language allows the most complete and detailed description and presentation of the system and makes such a description readable and understandable not only for those involved in the simulation, but also for those who did not participate in it. But for any modeling technique, there must be a certain object with real socio-economic systems. In our case, this will be the legal security of land relations in a particular region. Such a region will be Baku (Azerbaijan), since the authors of the article are the specialists of land law in the system of sustainable development of this particular region.
4. RESEARCH RESULTS

It should be based on a specific goal, the fulfillment of which will be a fundamental aspect of modeling sustainable development for the region we have chosen. We will designate such a goal as “Ensuring the legal security of land relations for the sustainable development of the region” (L0). Thus, we must determine the stages of achieving this goal. We present this in a convenient, visual, graphical form (Figure 1).

Thus, the goal that we set for ourselves during the simulation (L0) must have something at the input and give a certain effect and result at the output. This can be depicted graphically, by means of a diagram (Figure 2).

The modeling technique involves the formation of the main stage-sequential effective model for achieving “Ensuring the legal security of land relations for the sustainable development of the region” (L0). This is shown in Figure 3.

Thus, we characterize the achievement of stage L1 "Law Enforcement":

L1.1. Legal regulation of land relations regarding transactions with land plots. They are oriented by law to the concentration of agricultural land ownership, optimization of the size of agricultural enterprises, primarily family farms. It is necessary to fix at the legislative level the permission is recognized as the only legal basis for the alienation of a land plot and the conclusion of an appropriate agreement. A permit for the alienation of a land plot must be issued by a local government body, which is an agricultural body or administrative bodies of districts.

L1.2. Economic structure of sustainable development. The economic structure should be oriented towards social market economies. Its main foundations in the system of sustainable development should be: private ownership of the means of production with increased legal responsibility of owners for the use of capital; free competition and open market with government influence; ensuring a stable currency and sustainability of economic policy; support of integration processes in the economy both in the country and within the EU; system of social protection of the population from the negative impact on the market.

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![Figure 1](image1.png)

**Figure 1.** Certain stages of ensuring the legal security of land relations for the sustainable development of the region

![Figure 2](image2.png)

**Figure 2.** L0 «Ensuring the legal security of land relations for the sustainable development of the region» achievement diagram

Formed by authors
Figure 3. The main stage-sequential result model for achieving “Ensuring the legal security of land relations for the sustainable development of the region” (L0)

Formed by authors

Figure 4. L1 "Law Enforcement" achievement model
Formed by authors

L13. Sustainable land use. Sustainable land use is an evolutionary process of the functioning of the national economy, which is based on the principles of efficient use of land resources while maintaining their fertility, preserving the environment, aimed at developing territories in order to improve the living standards of the population. Sustainable land use is recognized as carried out in accordance with the concept of sustainable development with the preservation of natural resource potential, the use of which is aimed at meeting the needs of subjects of land relations (Figure 4).

Of course, when modeling the stages of achieving a certain goal, one should also present planning for their implementation in terms that should be followed by the region chosen for modeling (Figure 5).

Thus, we characterize the achievement of stage L2 "Ensuring environmental safety in the region":

L21. Ecologization of the economy. Strengthening the ecological orientation of economic systems in the process of their transformation, which should be manifested in the formation of a new economic and environmental consciousness and culture, environmental responsibility, the approval of modern environmental values, the formation of an appropriate legal and institutional framework aimed at public control over the system of relations in the triad "man - economy - ecology", the use of sanctions and incentives to regulate the impact of economic systems on the state of the natural environment.
L22. Formation of an environmentally safe structure for sustainable development. The formation of an environmentally friendly structure for the sustainable development of the economy should be the result of transformations that will form the regional economy, which should function on the basis of sustainable development. In turn, the system of legal security under such conditions takes on a new form, reflecting the use of all types of potential, combined by information, thus enhancing the value of the information resource.

L23. Formation of ecologically safe land use. It is important to determine in the land management system, first of all, the territorial aspect of the formation of environmentally safe land use, therefore, the solution of environmental issues of land use must be considered through the prism of their spatial location (Figure 6).

Planning to achieve stages L2 is shown in Figure 7.
Thus, we characterize the achievement of stage L3 "Introduction of innovative technologies for the security of land relations in the region":

L31. System surveillance technologies. Systematic monitoring of the state of agricultural land, the results of which are operational reports, reports, scientific forecasts, thematic maps and other materials provided to ensure sustainable development.

L32. Information and legal support of the land cadastre. Information support and maintenance of the land cadastre allows users (legal security system) to receive and use land cadastral information data to ensure sustainable development.

L33. Forecasting and planning of sustainable development of territories. Forecasting and planning the sustainable development of rural areas (operational cartographic display of the results of forecasts for the development of territories using innovative technologies makes it possible to make appropriate management decisions on the sustainable development of territories at the scientific level) (Figure 8).

Planning to achieve stages L3 is shown in Figure 9.

5. DISCUSSIONS

Discussing the results of the study, one should compare them with similar ones in this area. A different group of scientists investigated [13-15] the main legal and social land relations. They came to the conclusion that such relations arise between public authorities at all levels and local governments, legal entities and citizens regarding the ownership of land and its use for its intended purpose, which, taking into account the special properties of land as an object of public relations, are mainly regulated by land law and partly civil law to the extent that they are not regulated by land law.

Often in this area of research there is [16-18] an orientation towards planning the development of land relations. State land use planning is an important and necessary element of the system for regulating public relations in this area and ensuring legal security. Its task is to ensure the optimal distribution of land between the spheres of production and other economic needs, the maximum safety of agricultural land, especially the most valuable agricultural land. The task of planning land use is also the involvement in agricultural circulation of land plots that are not used for their intended purpose, the constant increase in their fertility, the implementation of anti-erosion and anti-mudflow measures, the creation of conditions for land reclamation, their safety from pollution and clogging. To solve these problems, scientists [19-21] develop national and regional models of land use and protection.

However, our study has a difference, which lies in different emphases. Our focus is on modeling and sustainability, which makes our research findings new and interesting.

6. CONCLUSIONS

One of the main directions in the formation and development of the system of legal security of land relations for sustainable development is the improvement of the mechanisms for the development of land relations, which consists in determining the legal, organizational and economic mechanisms with a specific set of tools to increase the environmental, economic and social effect in the land resource...
sector. The legal mechanisms for the sustainable development of land relations are an integrated set, a system, they are closely interconnected, but retain their individual significance and have an ultimate environmental and social goal, and therefore are environmentally and socially oriented in accordance with the concept of sustainable development.

Land relations as a subject of legal security: 1) arise in relation to land as an object of legal regulation, the subjects of which are executive authorities or local self-government bodies, and on the other hand, individuals, legal entities, territorial communities that own, use and dispose of a land plot in the relevant legal basis; 2) aimed at the rational and efficient use of land by all subjects of land relations; 3) are characterized by a combination of public law and legal framework for their regulation. Improving property relations on the basis of the proposed model will certainly lead to positive changes in the security system and the reproduction of land resources. From an economic point of view, the investment attractiveness of agricultural land use should increase, and thanks to a more rational use of the natural resource potential of lands, production efficiency will increase.

As a result, a detailed model range of stages for ensuring legal security in land relations in the system of sustainable development of the region was obtained. The novelty of the obtained results is revealed through the use of new techniques for modeling the process of ensuring legal security in land relations in the system of sustainable development of the region. The study has a limitation in the form of not taking into account the legal specifics of permanence for all regions. Subsequent studies should provide for the expansion of modeling to the scale of not only a single region, but also a country.

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