**Agricultural lands management system development**

The paper briefly analyses the state and use of the agricultural lands in Tver region and describes the trends of their distribution. Revealed data confirms the thesis that the land resource management system needs further development and restructuring, especially in terms of agricultural lands management, irrespective of the form of ownership of such lands. The article establishes main development trends for land fund and agricultural land management systems in Russia.

*Key words:* land fund, agricultural lands, management system, development, land use, efficiency.

Nowadays all lands in the Russian Federation belong to seven different categories. The permitted use of any land plot depends on its category. But the situation is constantly changing due to different circumstances, so the actual use of lands is changing either. Such changes include:

Forest vegetation expansion to the land plots, bogging due to inappropriate use or other natural and human impact;

 Changes in areas, occupied by residential places and industrial objects:

Road building and communication lines installation, water storage development etc.

That is why we rather often need to change the category and kind of permitted land use respectively. In the Russian Federation such issues are regulated by the Federal Law № 172-FL ”On changing the category of lands or land plots”, dated 21.12.2004, as well as other federal laws and legislative acts of the RF and its regions that contain standards or are dedicated to the regulation of this process. It is worth mentioning that nowadays national land law is a full member of national land fund management system, it contains reasonable grounds and provides detailed procedure of land category changing: stipulates the persons, who are in charge of such a change, terms of changing etc. However, issues related to the development of management methods, aimed at certain categories remain unsolved. First of all, it concerns agricultural lands. Let’s have a look at the changes trends for quantitative features of the land resources, located in Tver region (table 1) [7].

Table 1

Land distribution trends in categories

in Tver region for the period from 1991 till 2017 (thd. hа.).

|  |  |  |
| --- | --- | --- |
| Land Category | As of 01.01 | 2017 +/- Compared to 1991 |
| 1991 | 2015 | 2016 | 2017 |
| Agricultural lands  | 5325,0 | 2575,9 | 2575,7 | 2575,4 | - 2749,6 |
| Residential lands  | 65,3 | 409,6 | 410,7 | 410,9 | +345,6 |
| Industrial lands or any other special lands | 192,8 | 119,7 | 120,1 | 120,5 | -72,3 |
| Lands for specially protected territories and objects | 21,4 | 81,6 | 81,6 | 81,6 | +60,2 |
| Forest lands | 2594,1 | 4832,9 | 4832,9 | 4832,6 | +2238,5 |
| Water lands  | 36,0 | 174,6 | 174,6 | 174,6 | +138,6 |
| Reserve lands | 185,5 | 225,8 | 224,5 | 224,5 | +39,0 |
| Total amount of lands  | 8420,1 | 8420,1 | 8420,1 | 8420,1 | - |

The data in table 1 shows that in Tver region under the research period there is an agricultural lands reduction ( – 2749,6 thd. ha.), increase in forest lands (+2238,5 thd. ha.), residential lands (+345,6 thd. ha.) and water lands +138,6 thd. ha). Revealed trend proves that the use of the most valuable land category i.e. agricultural lands is inefficient, they are turned into forest and water lands due to woody vegetation and flooding. Besides, significant amount of agricultural lands is not used or is used inefficiently. Apart from that the agricultural lands state is constantly deteriorating, for crop-engineering works in most areas are scarcely carried out. Such trends are common for most federal districts.

Nowadays there are no unified standards that would help to create disturbed lands restoration program at the federal level. On the one hand, this is stipulated by the variety of properties that are inherent to certain regions of our country, on the other hand by insufficient environment monitoring. Proper monitoring would facilitate creating efficient preventive measures implementation system [2].

Revealed data also confirms the thesis that land resource management system needs further development and restructuring, especially in terms of agricultural lands management, irrespective of the form of ownership of such lands.

Let’s analyze, what nowadays is meant by agricultural lands management and how it is performed.

S. N. Volkov agrues that land resources management is a constant, conscious and deliberate impact that state and society exert on land relations, taking into account available data and changing environment conditions [1]. Table 2 contains Federal management bodies that are subordinate to President and Government of the Russian Federation.

Table 2

Organizational scheme of Federal bodies that are subordinate to President and Government of the Russian Federation

|  |  |
| --- | --- |
| Federal ministries that are subordinate to President of the Russian Federation | Federal bodies that are subordinate to the Government of the Russian Federation  |
| Federal services (12) | Federal ministries (4) | Federal ministries (12) | Federal services (16) | Federal agencies (19) |
| Ministries 4Agencies 9Services 19 Total: 32 units | Federal services (7) | Ministries 12Agencies 19Services 16 Total 47 units |

It should be noted that only 4 ministries and 2 federal services deal with agricultural lands use and management, though there are 79 federal bodies in Russia. This certainly hinders both agricultural lands and land fund management. Besides, the data set, related to agricultural lands state, title holders or any other relevant matters is fragmented and needs further enlargement and arrangement. We can conclude that nowadays in Russia the principle of land management system unity and integrity is not implemented to full extent. This principle implies organizational and functional management unity. Such unity hasn’t been achieved in Russia yet, as land management is assigned to several ministries. Lack of integrity in land management system hinders its consistency and synergy, i.е. doesn’t let use benefits of all links that are related to element management, update in time and boost functions that give the possibility to increase managerial processes efficiency and generate up-to date data set, required for taking reasonable managerial decisions in time [6].

 Therefore, it is necessary to establish unified government body that will address all issues, related to land resources management in our country and, in particular, agricultural lands management, for these lands are the most valuable ones. The sooner such body appears, the better.

The Russian Federation is a federal state, so land resources management is carried out at federal, regional and municipal levels at once. Thus, the agricultural lands management system should be based both on unity and differentiation of authorities. This will help to consider both regional and municipal distinctive features. The principle of required number of degrees of freedom in management should also be taken into account, when dealing with land resources This is related to the fact that land management efficiency implies both management system unity and shift of duties to other management levels. Due to the weakness of this element the land management system is not flexible, it can’t adjust to constantly changing social, economic and ecological conditions, consider all regional specific features.

While establishing regional and municipal governing bodies, we should comply with the law of correlation for management and managed systems. Management system (Government of the Russian Federation) and the managed subsystems (regions, municipalities) should have similar land resources management structure and functional capacities. Their goals also should coincide with each other, but the tasks and activity areas should be more specific. Only if this condition is met, then the reasonable balance between individual responsibility and joint leadership in land management can be achieved.

In land resources management we should take into account the law of land resources management systems variety maintenance. This law assumes that per art.1 of the Land Code of the Russian Federation the management systems should be distinguished along with the legal basis for land use patterns for different land categories. This is stipulated by the fact that constituent units of the Russian Federation are significantly different from each other in terms of environmental and climatic, social, economic and other factors, as well as in quantity and quality of lands. However, the actual state of things in most regions shows that the land laws are taken from federal legislation. Tver region is a striking example of this rule. There, there are no regional laws that regard distinctive features of agricultural land transactions.

А.А. Varlamov points out that the main functions of land resources management are: land arrangement, registry (cadastre) maintenance, assessment, supervision (control), monitoring. [2]. We believe that this list should be extended, as the elaboration of administrative and economic enforcement actions in terms of land relation subjects is extremely important. Without them the appropriate land property relations management would be impossible, it would be hard to adjust these relations to constantly changing social needs. Also we should add to this list another crucial function – establishment of evaluation criteria for different land use efficiency types: economic, social etc. The elaborated unified system of interrelated values provides reasonable assessment of land use efficiency for different categories, including agricultural lands, as well as land and environment state.

Agricultural lands management scheme in Russian Federation, duties and functions of every management level are shown in fig.1.

Agricultural lands management, as well as any lands management is divided into several levels from federal to private one (for federal and legal entities). Duties and performed functions of Russian government agencies have their own hierarchy. However, we would like to focus on specific features and burning issues that Russian governing bodies have to face at each level in terms of their duties and performed functions.

For example, the land arrangement hasn’t realized its potential as a management tool yet. The existing regulatory basis doesn’t comply with modern socio-economic relations development trends [5]. Land arrangement plans are hardly developed, and that results in difficulties by land protection and land use planning. Thus, we should work out corresponding state program (national project), that stipulates the deadlines, persons in charge, and financing sources for land arrangement.

**Duties and performed functions**

**Duties and performed functions**

**Management levels**

State

Regional

Мunicipal

Information database development

Registry maintenance regulations

land arrangement, cadastral evaluation

Land state and use monitoring environment monitoring, financing, land tax and rent determination

Physical and legal entities (private management)

Regulatory measures

Administrative and economic enforcement actions

Establishing evaluation criteria for different efficiency types

Pricing change on land property market by economic impact measures

Establishing land plots size limits

Supervising (control) function

Fig. 1.Agricultural lands management scheme

Insufficient current and reliable data on land state and use, obtained from monitoring, as well as lack of valid databases that contain quantitative and qualitative properties of the land plots also exerts negative impact on proper land state evaluation and their use efficiency.

The main reason for inefficient agricultural lands monitoring is the absence of corresponding digital maps of agricultural lands utilization that would portray field, crop rotation and agricultural grounds boundaries etc. This information is extremely important, for the cultivated area boundaries, soil fertility properties and soil covering properties in agricultural lands are constantly changing. Quick acquisition of this information is of utmost importance for agricultural management efficiency increase, for making reasonable managerial decisions by all concerned bodies.

 Due to the absence of structured public database that would register the qualitative and quantitative properties of land resources and contain both economic data and information about physical features and properties of the land the image of object of management can be distorted or land resources management results evaluation can be partial or biased. Therefore, it is necessary to advance methodology for Unified Register of immovable property, subsection of which would be the State Real Estate Cadastre that would involve all concerned persons, who would like to get relevant information.

The absence of unified system of interrelated efficiency evaluation criteria, related to certain kinds and categories of lands in land resources management system causes improper evaluation of land management system performance and its elements. Efficiency evaluation criteria for the land management system should reflect all vital aspects and links that are crucial to its regulation, formation, proper functioning and development. This approach will significantly simplify the comparison of conceptual management model to its real state. To make it possible, the criteria system should be properly structured and contain integrated generalized and specific values that will help to make more reasonable managerial decisions in terms of land relations. It also should reply questions that are vital for society to be exact: how we should use land resources, what information should provide databases, how efficient land relations regulation is and what we should do to improve land resources management.

Nowadays state and especially regional legislation drags far behind land property relations. Due to this significant amount of unused, misused or improperly used lands are not involved in the market turnover. This applies especially to agricultural lands. It is worth mentioning that in the event of land property relations public and private law relations become interconnected. Consequently, legal regulation of land property relations is carried out by means of both land and civil law, and sometimes disputes arise out of this combination that evidently are to be settled.

Insufficient administrative-economic enforcement actions, related to land law breach and absence of incentives for efficient use of agricultural lands, leads to that the land plots users and owners are less interested in the efficient use of their lands. Often lands act as investment and capital maintenance tool, rather than manufacturing tool. We believe that in order to enhance efficiency of lands use, especially agricultural ones, it is necessary to make the following amendments to the Tax Code of the Russian Federation: to apply increased tax rate, if regulatory bodies of corresponding management levels will find out the cases of non-use (or non-purpose use) of agricultural land plots (for instance 1,5% of land cadastral value instead of 0,3% that is levied now).

Thus, inefficient land fund management, including agricultural lands management (The existing land resources management system doesn’t comply with modern requirements, land arrangement is inappropriate, there are no up to date information databases) can provoke acceleration of land degradation and trigger other processes that can result in soil exhaustion in virtue of natural and human impact. Agricultural lands state is crucial for our country, as Russia is a prospective agricultural goods exporter*.*

While managing lands we should take reasonable steps at all levels (federal, regional, municipal), constantly improve land and property relations management system, as these steps are vital for the rational land use – one of the most valuable resources in the world. The agricultural lands, in particular, are of utmost importance in this sense.

REFERENCES

1. Volkov S.N. Economic and mathematical methods in land management/ S.N. Volkov. – М.: KolosS , 2007. – 696p.
2. Varlamov A.A.. Land registry. In 6 volumes. Vol. 2: Land resources management/А. А. Varlamov. – М.: Publishing house: KolosS, 2005. -528p.
3. Murasheva А.А., Stolyarov V.М., Yakomaskin А.F. Promising areas for disturbed lands restoration programs at the federal level // International Agricultural Journal. 2017. №6.p. 18-21.
4. Lazareva О.S. Regional land resources management: Efficiency assessment // Tver State University Bulletin . Series: Economics and management. 2019. № 2. P. 123-128.
5. Lazareva О.S., Аrtemiev А.А., Lazarev О.Е. Regulatory basis for land relations in Russia // Tver State Technical University Bulletin. Series: Social and human sciences. 2014. № 1. P. 90-94.
6. Lazareva О.S. Management methods for land and property relations in Russia: Essence and development // Human, socio-economic and social sciencies. 2015. № 2. P. 333-336.
7. Annual regional report on state and use of lands in Tver region. Tver. 2018.