Regulation of land reallocation based on the preservation of the most valuable agricultural land

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Abstract. The analysis of different approaches to agricultural land reallocation implemented in several countries leads to the proof that the current methods of preserving valuable agricultural land in Russia are not effective and that the cancellation of compensation of agricultural production losses had led to some negative consequences. The authors developed a new methodology of allocation and preservation of the most valuable agricultural land and carried out calculations of their areas in all federal districts of the European part of the Russian Federation, which includes the most part of arable land in the country. Based on that was developed a new approach to land reallocation and economic regulation of that process.

1. Introduction
Urban development, expansion of urbanized areas is important, but it should be accomplished with the least damage to agricultural production, the potential of its productive lands and soils [1, 2]. The growth of urbanization, the expansion of industrial production, lead to a conflict between the interests of industry, the social sphere, and the interests of agriculture. The solution for that problem lies in economic and administrative methods of state regulation [3-8].

In Russia, the reallocation of agricultural land has been regulated since 1971. According to the Land Code of the RSFSR, adopted on July 01, 1970, promulgated on January 1, 1971, all arable land with area 0.01 ha, and above was considered as "the most valuable productive agricultural land" (which is a legal term) and its reallocation were carried out only by a decision of the Government.

According to the Resolution of the Council of Ministers of the USSR of August 09, 1974 No. 636 “About compensation of land users losses and losses of agricultural production during the withdrawal of land for governmental or public purposes”, regional agricultural bodies had to create special accounts for the compensational purposes and use them only for land recultivation and implementation of measures to improve their fertility.

In 1987, the Council of Ministers of the RSFSR adopted Resolution No. 427 of November 10, 1987 “About the cost standards of land development as compensation for the withdrawal of agricultural land for non-agricultural purposes and about the procedure for using funds intended for compensation of agricultural production losses”. Gosagroprom of the RSFSR had the right to use up to 50% of funds from special accounts for the land development purposes.
With the beginning of land reform and the adoption of the Land Code of the RSFSR of April 25, 1991, the problem of withdrawal productive land for non-agricultural purposes should have been solved on the basis of the results of the cadastral valuation. However, the possibility of applying this provision appeared only after the adoption of the Resolution of the Government of the Russian Federation of August 25, 1999, No. 945 “About State Cadastral Valuation of Land” and No. 316 of April 08, 2000 “About Approval of the Rules for State Cadastral Valuation of Land”. At the same time, it was regulated that the withdrawn land plots should not have a cadastral value higher than the average regional value. The withdrawal of the most valuable agricultural land was prohibited. The authorities of the respective regions approved the list of plots assigned to that category.

Today the mechanism of preserving productive lands from unreasonable withdrawal from agricultural use is defined by the Principles of State Policy of the Russian Federation land fund usage for 2012–2020.

The new Strategy of sustainable development of rural areas in the Russian Federation for the period until 2030 is aimed to protect and increase the efficiency of the use of agricultural land based on an assessment of its quality and classification by suitability for agricultural use.

At the same time, according to the National Security Strategy of the Russian Federation, the country's food security is ensured, first of all, by “increasing soil fertility, preventing the reduction of agricultural and arable land area and depletion of that land”.

The importance of preservation of the most valuable agricultural land and securing the use of agricultural land as the main means of production in agriculture are recorded in the Land Code of the Russian Federation (articles 1, 79, 100). Purpose of those articles is to preserve valuable land. However, in our opinion, these rules are not provided with proper implementation mechanism.

Moreover, the previously existing mechanism of protection of the most valuable agricultural land - compensation for losses of agricultural production, was eliminated by Federal Law adopted on December 18, 2006, No. 232 “About the amendments to the Town Planning Code of the Russian Federation and certain legislative acts of the Russian Federation”.

2. Models and Methods

The modern version of the Land Code established the cadastral value of land parcels as a criterion to distinguish the most valuable agricultural land (the value per ha should be 30-50% above average) and made that process arbitrary for the regional government. Such an approach led to a situation where some regions with a rich amount of fertile land have not allocated almost any of agricultural land as the most valuable. Thus, in the Republic of Bashkortostan, the Amur, Voronezh, Kaliningrad, Kursk, Lipetsk and Orel regions, the area of the most valuable agricultural land is about 1% of the total arable land area of the corresponding region [9].

Generally, in Russia in the cadastral register, agricultural land plots comprise several separate contours or fields. These fields have different soil quality and therefore different value, but they considered as a single land plot and the cadastral value can be calculated only for the entire multi-contour land plot as a mean value of all different contours. Thereby the occasions when cadastral value per square unit of the whole plot is well above average are rare. In addition to that, the cadastral value should be recalculated every 3-5 years, which may lead to a situation when agricultural land plots previously allocated as the most valuable will lose that title.

The concept of the value of agricultural land consists of its utility, suitability for agriculture, but not in cadastral or market value directly. Instead of the cadastral value, we propose to use the grain equivalent as a criterion for the allocation of land plots as the most valuable. It is a stable indicator of land fertility and its suitability for agriculture. The grain equivalent is a calculated cumulative value of the yield of grain and other types of crops recommended for cultivation in this agro-climatic zone. We calculate average gross income from each crop (taking into account the regional crop structures and recommended crop alternation in the crop rotation) and then convert it sum back into the yield of grain crops [10].
It turns out, that the most suitable for agriculture (especially for cultivation), are the plots with the grain equivalent value above 30.0 centers per ha, or the first four land classes, according to the corresponding classification [11]. We suggest grouping them the following way: Federal importance (1-2 classes); Regional importance (3-4 classes).

3. Results and discussion

Table 1 depicts the generalized results of the allocation of the most valuable agricultural land in 53 regions of the European part of Russia in the context of its federal districts.

Table 1. Summary on the allocation of the most valuable productive agricultural land in the European part of the Russian Federation, thousands of ha [9, 12-15].

| Federal district         | Area of agricultural land | Calculated area of the most valuable agricultural land (using the grain equivalent criterion) | Area of the most valuable agricultural land stated by the regional authorities | % of the calculated area of the most valuable agricultural land |
|-------------------------|---------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------|
| Central                 | 29,382.6                  | 10,904.5, 8,441.0, 19,345.5, 65.8%                                                             | 265.5                                                                            | 1.4%                                                             |
| South                   | 31,355.5                  | 4,183.3, 8,089.3, 12,272.6, 39.1%                                                              | 2,521.3                                                                         | 20.5%                                                            |
| Volga                   | 51,257.5                  | 10,060.6, 18,091.4, 28,152.0, 54.9%                                                            | 358.7                                                                           | 1.3%                                                             |
| North Caucasian         | 11,382.7                  | 874.6, 2,912.8, 3,787.4, 33.3%                                                                | 47.7                                                                            | 1.3%                                                             |
| Northwestern            | 5,532.2                   | 31.6, 2,011.2, 2,042.8, 36.9%                                                                | 205.8                                                                           | 10.1%                                                            |
| Total for the European part of Russia | 128,910.5                  | 26,054.6, 39,545.7, 65,600.3, 50.9%                                                          | 3,399.0                                                                         | 5.2%                                                             |

The largest share of the most valuable in the total area of agricultural land is in the Central and Volga Federal Districts: 65.8% and 54.9%, respectively, where Chernozems and Alfisols are predominant. The share of the most valuable in the total agricultural land area of the European part of Russia is 50.9%, with merely 5.2% of land plots actually allocated to that category. The regional government of only 23 of the 53 Federal subjects of Russia adopted the Resolution of the allocation of the most valuable agricultural land. The distribution of the most valuable agricultural land in the European part of the Russian Federation is shown in figure 1.

In order to secure the protection of the most valuable agricultural land from non-agricultural use, it is necessary to implement not only administrative but also economic regulation methods. We propose to employ the principle of payment for the conversion of the most valuable agricultural land (which is in private ownership) into another appropriate type of land use, for example, for the construction. Such a measure should allow regulating land reallocation more efficiently, greatly reducing corruption risks.

Similar approaches to the land reallocation regulation are common in other countries, for example, in the People’s Republic of China, in the United States of America, in the Republic of Belarus, in the Republic of Kazakhstan [16].

4. Conclusion

Application of considered measures in the spatial development process should allow avoiding or at least adjusting the outflow of valuable agricultural land, and besides that, may resolve some minor issues of municipality budgets where should go all the described payments.
Figure 1. The distribution of the most valuable agricultural land in the European part of the Russian Federation.

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