Efficiency of land use in the Russian Federation in the post-reform period: problems and prospects

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Abstract. Human life is shaped by two worlds. The first one is the natural world of plants and animals, the earth, the forest, the air and the water—a world that arose long before the appearance of man. Another world is the world of social institutions, arts and crafts that man creates for his livelihood with the help of tools, knowledge, and purposeful transformation of space—the environment of his habitat. Just a little effort is required to destroy fragile and vulnerable life on the Earth; one just needs to tear the soil off, cut forests down, destroy grass cover, and fill reservoirs with sewage. Nature is so unstable, unpredictable and contradictory that in this situation, people need to make efforts to achieve an understanding of how to strengthen and balance the capricious generosity and subtle mechanisms of interaction between nature as a whole and its integral part—the earth.

1. Introduction
In the twenty-first century, society simply must recognize that clean air, clean water, unpolluted soil, well-maintained territory is a common national necessity, along with the need for a strong public order and advanced health and education systems. Thus, as humanity enters a new era of industrialization and urbanization, the problem of rational use and protection of land resources, as well as the organization of the territory through land management, becomes practically necessary and increasingly complex, due to the lack of other alternatives.

The world population is now increasing by 90 million people annually and according to real estimates will be 8 billion people by 2024 [1]. Calculations show that the production of food for each person requires 0.20-0.30 hectares of agricultural land and 0.07-0.09 hectares of territory for housing, roads, recreation. To meet this requirement by 2024, food production compared to the 80-ies of the XX century had to double, and in developing countries—to increase 4 times. To solve this problem, you must solve a number of very important practical issues related to the estimation of reserves of land resources, bearing in mind the possibility of expanding the area of productive land, quality improvements of existing agricultural land, increase land productivity by improving farming systems, reducing of land capacity in non-agricultural sectors, the economical use of land resources in general.

The expansion of arable land is limited by climatic conditions of a number of regions, physical characteristics of the land surface, the availability of water resources. At the same time, the possibilities of expanding land resources, provided the peaceful development of the economy, are very
significant in many countries. The growth of food production in the world is now mainly due to the large-scale application of mechanical energy and scientific and technical knowledge in agriculture. However, arable land today is the main means of production in agriculture.

2. Results and discussion
By now Russia has completed the main stage of land reform [2]. The main task of this stage was solved—the monopoly of state ownership of land was eliminated by law and direct access of the population to land was provided. The country, during a short period of time, created a new land system, the basis of which was: a variety of forms of ownership of land, the multiplicity of land management, the fee for land use. However, throughout the period of democratic land reforms in Russia, the solution of the majority of the most important issues related to the adoption of land legislation, the development of the Russian land cadastre system, registration of land rights, land valuation, the formation of land turnover, land management, went with great difficulties, and was often blocked.

As a consequence, the necessary economic mechanism regulating the transition of Russian land relations to the market economy was not created in a timely manner, priorities in land reforms were not established, there was a chronic underfunding of land management works, departmental structure, outflow of qualified personnel, excessive politicization of the land issue, and inefficient system of land payments. Difficulties in creating the legislative and regulatory framework for the development of land relations are the main reasons for inefficient land reform, and the land use as the result of the previous stage of land reforms is assessed as unsatisfactory and crisis.

Purely agrarian orientation of the state land reforms brought the reform to the establishment of private land ownership, denationalization of state agricultural land privatization on the basis of egalitarian redistribution of the property of tens of millions of individual owners of small plots of land long ago rejected by the world community.

This led to the rapid development of the crisis of the agricultural sector, the roots of which should be seen in the traditionally flawed state policy in relation to agriculture, manifested in the low level of technical equipment of the industry, administrative nature of its management, the alienation of rural producers from the results of their work, social and economic campaigns, priority of organizing redevelopment but not managerial economics.

Russia faces the difficult task of creating Pan-Russian national land use system that would combine freedom of land ownership and social justice in the use of land. Significant and very diverse natural resources are concentrated on the territory of Russia. With the current level of knowledge, we can confidently say that already discovered, studied and evaluated natural resources for many years to come will ensure the growth of the country's economy.

The land Fund of Russia is 1709.8 million hectares [3], that is 12.5% of the world territory and 420 million hectares of the continental shelf. In Russia, 55% of the world's black earth soils and 60% of softwood reserves are concentrated. Russia occupies a leading place in the world in terms of proven reserves of mineral raw materials. Russia's share in world oil reserves is 12-13%, gas-32%, coal-11%, iron-26%, Nickel-36%, cobalt-18%, lead-10%, zinc-15%. In terms of reserves of diamonds, platinoids, gold, silver, titanium, zirconium, rare and rare earth metals, Russia is among the top three countries in the world. The gross potential value of the explored balance reserves of the main types of minerals of Russia in the late 90 - ies of the last century was estimated at almost 30 trillion U.S. dollars, and the projected capacity is 150 trillion dollars.

In the total volume of minerals extracted in the world, Russia accounted for Apatite-55%, natural gas-28%, diamonds-26%, Nickel-22%, potassium salts-16%, iron ore-14%, non-ferrous and rare metals-13%, oil-12%, coal-12%. The mineral resources sector in the Russian economy occupies a leading place: about 40% of the funds of industrial enterprises and 13% of the book value of fixed assets are concentrated in the sphere of subsoil use. Raw materials provide 30% of GDP and about 50% of the country's exports. However, the specific terms of availability of active reserves (the ratio of total reserves to current annual production) the main types of mineral raw materials, whose
development is economically feasible according to the criteria of the world market, Russia is noticeably yields to some foreign countries.

Miscalculations in the economic policy of the last decade of the last century led to a sharp drop in the efficiency of subsoil use, which continues to be extremely low, and often does not meet the interests of the country. The model of economic development, focused on the priority extensive development of raw materials industries, has a deadlock character and is not able to lead the country out of the deepest crisis. The open economy, the developing processes of globalization and transnationalization make the extractive industries more sensitive to the global environment, which in turn requires strengthening the institution of the state regulation of subsoil use.

In addition, this circumstance is governed by the fact that from the economic point of view there are three important characteristics of mineral resources: first, the location of mineral deposits due to geological structure of the crust and, consequently, limited to a defined spatial framework; second, mineral resources are practically not being renewed; third, the development of mineral resources, the time factor should be considered as decisive. It follows that the focus on the integration of Russia into the world economy through the development of raw materials industries will contribute to the consolidation of the country as a raw material appendage of industrialized countries. Therefore, measures should be taken without delay to strengthen the state influence in the sphere of regulation of relations in subsoil use.

Specific measures to improve the state policy in the field of subsoil use are as follows: it is necessary to conduct continuous work to strengthen the institution of unified state ownership of the subsoil fund of the Russian Federation; to improve the state policy of licensing subsoil use, as well as those activities related to subsoil use and nature management; to restore and develop the system of subsoil study, to create a search reserve; to implement the development and introduction of new resource-saving technologies throughout the cycle – from extraction of raw materials to production of finished products; to adopt the Mining code; to work on formation of system of state geological control and mining supervision; to conduct regular monitoring of the mineral resource base of the countries; to develop a Federal program of reproduction and use of mineral resources, etc.

For example, the analysis of the USA legal literature [4] shows that the regulatory influence of the state, its public function in the field of environmental management is constantly increasing. In practice, this allows the main part of natural resources to be held in the hands of the state, to withdraw them from private property, in case of state and public needs, and to receive income to the state Treasury from the exploitation of natural resources.

Natural resources, which until the XIX century remained mainly in private ownership, by the beginning of the XXI century are gradually becoming the basis of the formation of the common property of civil society. A global trend is clearly emerging: in countries with developed market economies, individual private property, natural resources including, retains its position only in distributive relations. In the sphere of production, common ownership prevails, mainly in the form of shares. In many countries, multi-layered land use is a growing trend. However, the natural advantages associated with the climate, soils, subsoil, geographical location of the country are always the most important conditions for the organization of the land use process and its efficiency.

Over the last twenty years Russia created the basis for the new land regime: public monopoly on land was eliminated; the transition to the diversity of forms of land ownership and the free redistribution of land in favor of citizens were provided; paid land use was introduced; the objective conditions for the land mobility were created. Land reform in the Russian Federation manifested itself in: private ownership of land; elimination of restrictions on the provision of land; the possibility to organize peasant farms; elimination of dependence of granting of the land plots on will of public officials; permission of lifelong inherited land tenure, lease of lands.

At the beginning of land reforms, a strong impetus to the development of land legislation was given, but in the future the political situation in the country began to take precedence over common sense. The state executive authorities of the Federation and its constituent entities have virtually eliminated the management of the land fund of the country. The situation is aggravated by the lack of
clear delineation of state lands into Federal lands, lands of subjects of the Federation and municipal lands [5]. The consequence of this is such negative phenomena as the reduction of the area of productive land, abandonment of arable land, land degradation, land speculation [6], all kinds of inhibition of the processes of introduction into practice of rental relations [7].

3. Conclusion
Currently, problems remain and their solution is paramount to the further development of legislative base of regulation of land relations; implementation of the state evaluation of the land fund of the country; improvement and formation of the new system of land payments; creation of infrastructure of the land turnover; completion of the automated system of state cadastre and registration of immovable property; the formation of the new system of control of rational use and protection of land resources.

The implementation of land reforms in Russia includes three directions: reforming land ownership relations; accounting and valuation on a rental basis of land and resource potential as part of the national wealth of the country and state registration; organization of effective management of land resources of the country as a national treasure, the universal spatial basis of the national economy and the main means of production in agriculture and forestry, regardless of ownership forms.

Russia's huge land and resource potential allows it to move the country to the main, decisive direction in solving complex global problems (ecology, food, raw materials, space). Land potential, together with raw materials, with its effective use can become one of the most important prerequisites for Russia's sustainable entry into the world economy.

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