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CHALLENGES OF LAND MANAGEMENT IN THE AGRO SPHERE, CAUSED BY MILITARY AGGRESSION, AND THE WAYS OF THEIR SOLUTION

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The current state of agricultural lands, especially those damaged as a result of emergency situations and hostilities, is analyzed. It has been proven that the algorithm for removing lands damaged as a result of military operations from agricultural circulation must be fixed at the legislative level by making appropriate amendments and additions to the Land Code of Ukraine, Laws of Ukraine: "On Land Protection", "On Land Management". The current Land Conservation Procedure should be supplemented with criteria and indicators for establishing the degree of mechanical destruction and/or chemical pollution, because the direction, content and volume of restoration works and, accordingly, the amount of their financing depend on this. It is emphasized that only a differentiated approach to the transformation of technogenically polluted lands allows rational spending of funds and achieving the maximum environmental protection effect.

It is emphasized that in today's conditions, for an adequate and timely response to challenges in the field of land use and protection, in rural areas, land management

should have a dynamic multivariate (alternative) nature, especially at the local level, based on the main legally established principles.

The tasks of land management in the agrarian sphere, caused by military aggression, are formulated, and the ways of their solution are substantiated. The list of shortcomings in the legislative norms, which are present in the modern context when compiling land management documentation, is given.

Key words: *land management, agricultural land, destruction of soil cover, chemical pollution of land.*

Formulation of the problem. The crisis state of land resources in the majority of Ukraine, with a tendency to worsen as a result of emergency situations, armed aggression and hostilities, is accompanied by the irrational use of the country's land resource potential, the deterioration of the quality of the land and the decrease in productivity, the irregular nature of the functioning of land as a means of production, the absence of a unified state protection system lands, lack of tools for regulating land relations.

The picture is very dynamic: radical changes are often instantaneous. The total area of agricultural lands located in temporarily occupied, de-occupied and dangerous territories is about 10 million hectares. The normative monetary valuation of these lands is about UAH 33 billion. Unfortunately, we are talking about the loss of up to a quarter of the country's agricultural export potential.

According to our calculations based on data from Copernicus, NASA, and the Institute for the Study of War, as a result of hostilities on the territory of Ukraine, the number of fires has increased significantly, from the beginning of the invasion of Russian troops to the end of August, almost 170,000 hectares of land were burned. Most of them are along the line of hostilities as a result of shelling.

This is accompanied by the destruction of the soil cover, the development of degradation processes, in particular, such as mechanical destruction, pollution, including chemical, clogging, etc.

Part of the dangerous territories in order to return to economic use requires measures to eliminate the consequences of hostilities: demining, cleaning of fortifications, restoration of the surface layer, which requires the development of state programs and innovative projects.

In the conditions of military aggression, significant areas of agricultural land become unusable for their intended use as a result of damage. This makes it necessary to legislate the possibility of zoning damaged lands according to the degree of damage and determining their legal status. Lands freed from occupation remain dangerous for cultivation until their survey and demining, which requires time and possible withdrawal of land from agricultural cultivation with subsequent transformation.

More than 6 million hectares of arable land in temporarily occupied territories, of which more than 1.5 million hectares have been occupied since 2014. Almost another 4 million hectares remain unsafe for cultivation.

The challenges listed above determine the need to adjust the state land policy, improve regulatory and technical documents on the use and protection of land, in particular, norms and rules in the field of land management, standards in the field of land protection and the reproduction of soil fertility, in particular, those damaged as a result of emergency situations, armed conflict aggression and hostilities. Activities that "...contaminate or have another negative impact on land resources and the environment can be legal provided that the standards are followed, which establish criteria for the safety of land use and the environment and determine the maximum permissible indicators of the negative impact of unwanted or dangerous activities on them" [3].

Analysis of the latest scientific research and publications. The works of Dobriak D., Dorosh Y., Novakovskyi L., Tretiak A. and others are devoted to the determination of the tasks of modern land management at various stages of the development of land relations in our country and the development of a system of appropriate measures to solve them. At the same time, the authors emphasize the multifunctional nature of modern land management under conditions of accelerated

dynamics of transformational processes in the agrarian sector of the economy, its focus on the regulation of land relations in rural areas and the rational organization of the territory of administrative-territorial formations and individual economic entities on land [1, 2, 12, 13, 14].

However, new challenges in the agrarian sphere, related to military aggression, necessitate the formulation of new land management tasks and justification of their solution.

The purpose of the article to formulate the tasks of land management in the agrarian sphere, caused by military aggression, and to substantiate the ways of their solution.

Materials and methods of scientific research. The following methods of scientific knowledge were used during the study of issues related to the definition of tasks of land management in the agrarian sphere, caused by military aggression and providing ways to solve problematic aspects: monographic method, theoretical method, and generalization method.

Research results and discussion. Making balanced management decisions in the agrarian sphere in the conditions of dynamic transformation of the land use structure, the quality of the soil cover of agricultural landscapes, in particular in the context of the increase in the share of damaged lands as a result of military operations, requires the availability of correct information about the current state of land resources. The main source of such information can be the land inventory, which, according to part 1 of Article 35 of the Law of Ukraine "On Land Management" "is carried out for the purpose of establishing the location of land management objects, their boundaries, sizes, legal status, identifying unused, used lands irrationally or not according to the intended purpose, identification and conservation of degraded agricultural land and contaminated land, establishment of quantitative and qualitative characteristics of land necessary for the maintenance of the State Land Cadastre, identification and correction of errors in the information of the State Land Cadastre, implementation of state control over the use and protection

of land and making appropriate decisions based on them by executive power bodies and local self-government bodies" [9].

A necessary condition for the differentiated use of the land resource potential of rural areas and the application of land protection measures is the development and implementation of a land classification system by type and degree of damage, since the justification of the feasibility of further use of such lands in intensive agricultural cultivation, the direction of their transformation, the content and composition of restorative measures And since the majority of such lands are in private ownership, it is relevant to assess the losses and damages of agricultural land users, including lost profits due to the impossibility of growing marketable agricultural products of appropriate quality on damaged lands.

The main direction of the rational use of lands heavily damaged as a result of military operations is reclamation, which, according to Article 166 of the Land Code of Ukraine, is carried out on lands that "have undergone changes in the structure of the relief, the ecological state of soils and parent rocks, and in the hydrological regime" and is " a complex of organizational, technical and biotechnological measures aimed at restoring soil cover, improving the condition and productivity of disturbed lands" [4].

In addition, degraded lands that have undergone mechanical destruction and chemical pollution as a result of military operations may be subject to conservation, the procedure for which is to be implemented, approved by Resolution No. 35 of the Cabinet of Ministers of Ukraine dated January 19, 2022 [6]. According to part 2 of Article 172 of the Land Code of Ukraine, "land conservation is carried out by stopping or limiting their economic use for a specified period and by planting, afforestation or renaturalization" [4].

And the reclamation of disturbed lands, the conservation of degraded lands in accordance with the current land legislation of Ukraine must be carried out in accordance with the working projects of land management, the content of which must take into account the challenges of today, caused by the armed aggression of the Russian Federation, in particular, the type and degree of damage to the soil cover, the

specifics of the preparatory work (for example, demining of territories), remoteness from the combat line, danger of repeated damage, etc. For this, the algorithm for removing lands damaged as a result of military operations from agricultural circulation must be fixed at the legislative level by making appropriate amendments and additions to the Land Code of Ukraine, the Laws of Ukraine: "On Land Protection", "On Land Management". The current Land Conservation Procedure should be supplemented with criteria and indicators for establishing the degree of mechanical destruction and/or chemical pollution, because the direction, content and volume of restoration works and, accordingly, the amount of their financing depend on this.

Only a differentiated approach to the transformation of technogenically polluted lands allows rational spending of funds and achieving the maximum environmental protection effect. As a rule, the cost of soil decontamination work far exceeds the cost of agromelioration. Cleaning the soil with the help of phytomelioration takes a long time and requires equipment for the disposal of plant mass. Various domestic and foreign-made stationary plants for cleaning soils are quite expensive and energy-consuming. Such means of decontamination are expedient to use when eliminating the consequences of emergency emissions on very limited areas. In cases of diffuse pollution of the soil cover, agro-melioration is a rational environmental protection measure.

The main criterion for the removal of land contaminated with radionuclides from cultivation is the impossibility of guaranteed production of products that meet the current sanitary standards (DR-97) [11]. Making a decision on additional removal of land contaminated with radionuclides from cultivation requires a balanced approach, taking into account specific soil and climatic conditions. At the same time, they take into account the main physicochemical parameters of the soil, its granulometric composition, the reaction of the soil solution, the availability of phosphorus and especially potassium, which are of decisive importance in limiting the transfer of radionuclides from the soil to plants.

All the listed measures must be carried out on the basis of appropriate land management documentation, which "regulates the use and protection of state, communal and private lands" [9]. It is land management that is designed to ensure "the development and implementation of a system of land management measures for the preservation of natural landscapes, restoration and increase of soil fertility, reclamation of disturbed lands and reclamation of unproductive lands, protection of lands from erosion, flooding, drying, landslides, secondary salinization, acidification, waterlogging, compaction , pollution by industrial waste and chemical substances, etc., conservation of degraded and unproductive lands, prevention of other negative phenomena" [9, article 2, point "d"]. But in his system, in particular in the context of "implementation of land management at the national, regional and local levels", there are certain shortcomings, the overcoming of which has become particularly acute in today's conditions.

First of all, this concerns the current types of land management documentation, the comprehensive list of which is established by the norm of part 2 of Article 25 of the Law of Ukraine "On Land Management". Part 3 of the same Article emphasizes that "the types of land management documentation and their composition are established exclusively by this Law" [9]. This indicates excessive regulation of land management documentation in terms of the names and contents of land management projects and technical documentation on land management, the limitation of the number of their types, which significantly slows down the land management process in the conditions of dynamic changes in the structure of land use, cultivated areas of agricultural crops, etc., caused by armed aggression.

In addition, the content of the relevant land management projects, which is determined by the norms of Articles 46, 47 and 49-53 of the Law of Ukraine "On Land Management", does not provide for the obligation to take into account socio-economic and ecological aspects, due to which, in fact, the implementation of land management is reduced to the performance of tasks of forming land plots.

Scientifically based crop rotations are important in the system of measures for effective use and protection of land, the practical implementation of which is possible

only on the basis of land management projects that provide ecological and economic justification of crop rotation and land management. But the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Simplifying the Conditions of Doing Business (Deregulation)", adopted on February 12, 2015, excluded part 4 of Article 22 of the Land Code of Ukraine, which stipulated the obligation to use agricultural land for commercial agricultural production in accordance with land management projects developed and approved in accordance with the established procedure, which provide ecological and economic substantiation of crop rotation and land management [7]. At the same time, part 2 of Article 55 of the Code of Ukraine on Administrative Offenses, which established administrative responsibility for the use of the specified land plots without the specified land management projects, was withdrawn only on April 28, 2021 on the basis of Law of Ukraine No. 1423-IX [5]. According to the specified norm, "the use of agricultural land plots for commercial agricultural production without approved, in cases specified by law, land management projects that provide ecological and economic substantiation of crop rotation and land management entailed the imposition of a fine on citizens from fifty to one hundred tax-free minimum incomes of citizens and officials - from three hundred to five hundred tax-free minimum incomes of citizens".

In addition, in accordance with paragraph "d" of subparagraph 2 of paragraph 1 of the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Regarding the Creation of Conditions for Ensuring Food Security in Martial Law" "requirements of the Land Code and the Law of Ukraine "On Land Leasing" regarding the minimum the term of the land lease agreement shall not be applied to agreements concluded in accordance with subparagraph 2 of this clause." In turn, sub-clause 2 of clause 1 of this Law provides for the "leasing for commercial agricultural production for a period of up to one year of agricultural plots of state and communal property (except for those that are in permanent use by persons who do not belong to the state, communal enterprises, institutions, organizations), as well as land plots remaining in the collective ownership of a collective agricultural enterprise, agricultural cooperative, agricultural joint-stock company, unallocated and

unclaimed land plots and land shares (shares)" [8]. The latter, of course, makes it impossible to introduce and observe a scientifically based rotation of agricultural crops.

On the one hand, legislative "relaxations" regarding the observance of a scientifically based rotation of agricultural crops in crop rotations, in particular during the period of martial law, to ensure the country's food security, may be understandable, but on the other hand, crop rotations will contribute to the fastest possible restoration of lands damaged as a result of hostilities, usually in combination with other land protection (legal, organizational, economic, technological, etc.) measures.

In today's conditions, for an adequate and timely response to the challenges arising in the field of land use and protection in rural areas, land management, based on the main legally established principles, should have a dynamic multivariate (alternative) nature, especially at the local level.

With this in mind, modern land management projects must be provided with a logical scientific justification, developed on the basis of an updated legal framework, and must contain alternative solutions to the problems that arise before agricultural producers in the process of fulfilling their environmental and socio-economic tasks.

Regardless of the form of management and ownership, the land management project must provide the landowner or land user with the possibility of flexible management and use of land, not only taking into account market conditions, but also challenges caused by military aggression. Therefore, the result of the development and subsequent implementation of such projects should be the formation of a spatial framework of ecologically sustainable agro-landscapes, within which the land-resource potential of rural areas, including those affected by hostilities, missile attacks, etc., will be reproduced.

Conclusions and proposals. To respond to the challenges caused by military aggression, land management in the agrarian sphere is entrusted with the following tasks:

• land inventory;

• classification of lands by state and type of damage;

• assessment of losses and damages of agricultural land users, including losses, lost profits, restoration costs;

• reclamation of lands disturbed as a result of hostilities;

• conservation of degraded lands;

• introduction of other land protection measures (phytomelioration, detoxification, etc.);

• development or updating of land management projects, taking into account changes in the structure of crops and land use;

• making changes to the land legislation regarding the withdrawal of lands damaged as a result of military operations from agricultural circulation.

In order to solve the listed tasks, it is necessary to eliminate the shortcomings in the legislative norms regulating the preparation of land management documentation that exist in the modern context, namely:

• the impossibility of developing land management schemes for parts of the territories and for specific purposes (topics), for example, in territories that were de-occupied;

• the content of land management projects does not provide for the obligation to take into account socio-economic and ecological aspects, and in fact the implementation of land management is reduced to the implementation of tasks for the formation of land plots. The legislation does not stipulate the obligation to develop land management projects that provide ecological and economic justification for crop rotation and land management. The logical sequence of execution is violated;

• working projects of land management, technical documentation with land management are excessively regulated in terms of names and content, the number of their types is limited and does not meet the challenges of time. The logical sequence of execution is also broken.

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ЗАВДАННЯ ЗЕМЛЕУСТРОЮ В АГРАРНІЙ СФЕРІ, ВИКЛИКАНІ ВІЙСЬКОВОЮ АГРЕСІЄЮ, ТА ШЛЯХИ ЇХ ВИРІШЕННЯ

Проаналізовано сучасний стан земель сільськогосподарського призначення, особливо пошкоджених внаслідок надзвичайних ситуацій та бойових дій. Доведено, що алгоритм вилучення із сільськогосподарського обігу земель, пошкоджених внаслідок бойових дій, необхідно закріпити на законодавчому рівні шляхом внесення відповідних змін та доповнень до Земельного кодексу України, Законів України: «Про охорону земель», «Про землеустрій». Чинний Порядок консервації земель необхідно доповнити критеріями та показниками для встановлення ступеня механічного руйнування та/або хімічного забруднення, адже від цього залежить напрямок, зміст та обсяг реставраційних робіт та, відповідно, обсяг їх фінансування. Наголошено, що лише диференційований підхід трансформації техногенно забруднених земель

дозволяє раціонально витрачати кошти і досягати максимального природоохоронного ефекту.

Акцентовано увагу, що в умовах сьогодення для адекватної своєчасної реакції на виклики у сфері використання та охорони земель, на сільських територіях, землеустрій має носити динамічний багатоваріантний (альтернативний) характер, особливо на місцевому рівні, базуючись на основних законодавчо закріплених принципах.

Сформульовано завдання землеустрою в аграрній сфері, зумовлені військовою агресією та обґрунтовано шляхи їх вирішення. Наведено перелік недоліків в законодавчих нормах, які наявні в сучасному контексті при складанні документації із землеустрою.

Ключові слова: *землеустрій, сільськогосподарські угіддя, руйнування ґрунтового покриву, хімічне забруднення земель.*