DOI: 10.55643/fcaptp.6.53.2023.4233

**Kostyantyn Artyushok**
Candidate of Economy Sciences, Associate Professor of the Department of Economics and Finance, Academician Stepan Demianchuk International University of Economics and Humanities, Rivne, Ukraine;
e-mail: gakostya@ukr.net
ORCID: 0000-0003-2724-5385
(Corresponding author)

**Andrii Verstiak**
Candidate of Economy Sciences, Associate Professor of the Department of Economic Modelling Department, Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine;
ORCID: 0000-0002-8090-1233

**Pavlo Kravchuk**
Candidate of Economy Sciences, Associate Professor of the Department of International Economic Relations, Lutsk National Technical University, Lutsk, Ukraine;
ORCID: 0000-0002-4736-4915

**Oleksandr Dorofyeyev**
D.Sc. in Economics, Professor of the Department of Public Management and Administration Department, Poltava State Agrarian University, Poltava, Ukraine;
ORCID: 0000-0002-8608-0501

**Olena Polova**
D.Sc. in Economics, Professor of the Department of Business and Service Industry Development, Vinnytsia National Agrarian University, Vinnytsia, Ukraine;

**Iryna Kapelista**
Candidate of Sciences in Public Administration, Associate Professor of the Department of Public Administration, Interregional Academy Personnel Management, Kyiv, Ukraine;
ORCID: 0000-0002-1983-4617

Received: 29/10/2023
Accepted: 08/12/2023
Published: 31/12/2023



# INSTITUTIONAL SECURITY IN RELATIONS OF OWNERSHIP OF NATURAL RESOURCES: STATE ENVIRONMENTAL AND ECONOMIC POLICY AND DECENTRALIZATION

## ABSTRACT

The article defines the natural resource sphere of the national economy as the largest territorial and sectoral complex, which includes land, water, forest, mineral, natural and recreational and other types of resources. The lack of implementation of the allocation of a sufficient amount of funds aimed at the rationalization of nature use and the modernization of environmental infrastructure facilities, as well as the uneven distribution of capital investments for the protection and rational use of natural resources in the region for the period 2016-2022, was established. It is substantiated that in the conditions of decentralization of power, the general basis of institutional support for property relations over natural resources should be corporatization, development of rent relations, improvement of fiscal mechanisms in resource use, market-economic evaluation and capitalization of all-natural resources without exception at the local, regional and national levels. The theoretical foundations of the problems of institutional support in property relations in the conditions of decentralization of power have been deepened by determining the need to create an institutional system of property. This system provides for the development of lease relationships, approaches to investment projects, improvement of natural resource taxation mechanisms by improving the system of local taxes on the use of resources, and assessment of the value of natural resources at the micro, meso, and macro levels. The definition of ecological and economic problems of property relations is formulated, which, unlike the existing ones, are focused on the problems of attracting capital investments and current costs of the state for the protection of the natural environment in conditions of decentralization, as well as the fundamental basis for the formation of an institutional system of property in nature management, taking into account foreign experience. The results of the research can be used in the development of regional and national programs and forecasts on issues of nature management and environmental protection.

**Keywords:** ecological and economic relations, property, natural resources, capital investments, state regulation

**JEL Classification:** H82, L72, N50, Q13, Q20

## INTRODUCTION

In the conditions of European integration of Ukraine and decentralization processes, there is a need to balance the use and protection of natural resources at the level of national ecological and economic needs with the interests of the regions, which is based on the observance of the integrity of the territory, natural resource opportunities and, importantly, social factors.

Each of the natural resources (land, forests, waters, subsoil, elements of the animal and plant world) have its own specificity, and diversity in terms of use in economic activity and, in this connection, is characterized differently by the categories of economic science, and, therefore, requires different approaches to regulation by economic and legal theory and practice.

At the same time, ownership issues are mainly considered either in the context of the development of rent relations and the efficiency of nature management or from the


DOI: 10.55643/fcaptp.6.53.2023.4233

point of view of planning and organization of resource use in the region. Unequivocal answers to individual questions related to the redistribution of power from the centre to the regions have not yet been found. We believe that the primary steps towards solving these problems are:

- determination, at the level of national strategic documents, of a set of mutually agreed goals and tasks of decentralization and the implementation of necessary reforms in the construction of ecological and economic relations that complement the goals of regional and national development;
- introduction of changes to the current strategic documents that will determine the directions of development taking into account the ecological and economic orientation (the benchmark should be: the introduction of ecological regulations for recreational regions, the implementation of measures to spread ecological cultural and educational policy, etc.);
- ensuring interdepartmental coordination and synchronization in the purpose, tasks, tools, subjects and time frames of management of ecological and economic relations;
- development of the architecture of management of ecological and economic relations in the conditions of an innovative economy (problems, challenges, solutions and mechanisms);
- the introduction of examination of all draft laws on the subject of compliance with ecological and economic needs and interests (from the standpoint of society-centred, human-centred and production-centred paradigms) and mandatory determination of the expected impact on ecological and economic relations;
- implementation of a single information space in parts of the management of ecological and economic relations, which will ensure full interconnection of all structural and functional elements.

The basis for the formation and development of the state environmental and economic policy is ownership of natural resources as a multifaceted category that reflects existing social relations regarding the appropriation of means of production and objects of labour in the process of use, distribution and consumption of natural resources. Each of the types of natural resources (land, forests, waters, subsoil, elements of the animal and plant world) is characterized by their own special features, which can have different specifics of consumption and use and in this connection is characterized differently by categories in economic science, and, therefore, requires different approaches to regulation by economic and legal theory and practice.

## LITERATURE REVIEW

Not much attention was paid to the study of the formation and implementation of property relations over natural resources, in particular in the domestic scientific literature. Scientific works by Danylenko A., Sokolska T., and Shust O. (2017), Sabluk P. T. (2015), Libanova E. M. and Khvesyk M. A. (2014), Khvesik M. A., and Lyzun S.O. (2013) and others are devoted to these and related issues.

The study of the problem of the introduction of free circulation of land in Ukraine, including agricultural land, is the subject of research by Danylenko A., Sokolska T., and Shust O. (2017). The team of researchers is engaged in the study of socio-economic prerequisites for the introduction of free circulation of land (including agricultural purposes and substantiation of preventive measures of regulatory and legal regulation of land relations). In their opinion, the land should belong to the owner, the use and disposal of which should be implemented according to the norms of the Constitution of Ukraine, without deteriorating its natural properties. Also, the underdevelopment of the land market - the authors continue - leads to low efficiency of agricultural land use, disproportions in the agricultural sector and backwardness of rural agglomerations (Danylenko et al., 2017).

In the context of the research, it is worth mentioning the scientific research of Sabluk P.T. (2015), who believes that a national idea should be formed, a concept that will determine the reformation of the economy in the direction of innovation and socio-economic upliftment, i.e., should take the form of a driver of the economy. At the same time, the specific characteristics of various spheres of the economy must be taken into account. According to the conviction of Sabluk P.T. (2015), the model of the post-industrial stage of development of Ukraine's economy should cover the following main directions:

- combining the capital of the land with the capital of industries in order to ensure high efficiency of its functioning in all related economic sectors, since the economy of the country is a whole functioning system;
- the concentration of efforts of education and science in the field of progressive and information technologies in order to ensure the highly profitable functioning of the combined capital;

- concentration of the majority of the received income to solve the problems of society, which meets the needs of a socially oriented economy.

According to Libanova E. M. and Khvesyk M. A. (2014) interests of landowners regarding the responsible and careful attitude to land use and natural resources should be a priority in their management at the national level and the level of territorial communities. This determines the priority of socio-economic development at the level of rural settlements. They also note that the reform of the agrarian sphere, like other sectors of the economy, has not yet been completed and has a trajectory of decreasing the role of the state in managing these processes at the domestic level and in international relations. According to them, this leads to the asymmetry of the development of territories and the destructiveness of economic processes.

The studies of Khvesik M. A. and Lyzun S.O. (2013) prove that the transition to a corporate form of management and use of natural resources should take place under the conditions of market transparency by implementing the following mechanisms: creation of an updated form of state control and audit; mortgage lending; formation of a transparent system of management of natural resources based on the existing forms of their ownership; solving the issue of efficiency of use and responsibility for violation of legal norms; acceleration of the transition to management and disposal of natural resources by territorial communities. The authors also prove the need to transform the existing market mechanisms in the direction of the development of processes of corporatization, cooperation and other forms of ownership of natural resource assets; carrying out a thorough inspection and assessment of all-natural resources, the potential of their use and involvement in production and economic processes.

The issue of institutional provision of ownership of natural resources is closely related to such concepts as "ecological-economic relations", first of all, it is closely used with the terms: "ecological system", "ecological-economic system", "ecological-economic policy", "socio-ecological and economic system" etc. The concept of "ecological system" is sufficiently disclosed in the works of domestic scientists: Dobrovolskyi V.V. (2006), Azarov S., and Zadunaj O. (2020). The concept of "ecological and economic system" was revealed by: Yatsykovskyy B.I., and Holubka S.M. (2015), Rozum R. I., Buryak M. V., and Lyubezna I. V. (2015), Tananaiko T. et al. (2023). This layer of research contributed to the emergence of a comprehensive understanding of the problem, which was later transformed into the concept of "environmental policy".

The concept of "environmental policy" inspired other researchers and was modified by Demchenko N. V. and Kasatonova I. A. (2012). The fundamental dissemination of the ideas of the concept of "ecological policy" was carried out in the studies of Kryvokulska N. M. (2013), Zarzhytskyi O. S. (2012).

Therefore, the presented researchers analyze the management of ecological and economic relations through the impact on the environment, and the relationship in ecological, social and economic subsystems, which is based on the determined state ecological and economic policy and decentralization.

## AIMS AND OBJECTIVES

The purpose of the article is to clarify the role of the state in regulating ecological and economic activity in the conditions of the diversity of forms of ownership of natural resources, which involves the analysis of the main types of state expenditures for the protection of the natural environment and the generalization of international experience. The purpose of the conducted research is to determine the institutional support in the relations of ownership of natural resources in the conditions of the determined state environmental and economic policy and decentralization.

## METHODS

The methodological basis of the research is the fundamental provisions and principles of the modern concept of sustainable and ecologically safe development, the theory of market transformation of the economy and rational nature management. Economic and mathematical methods, statistical, comparison, graphical and tabular methods, abstract-logical methods, etc. were used to assess the state's expenses for the protection of the natural environment and to develop proposals and recommendations. Statistical data from the State Statistics Service of Ukraine served as the information base of the work.


DOI: 10.55643/fcaptp.6.53.2023.4233

## RESULTS

The question of ownership of natural resources in ecological and economic currents of various ideologies has undergone significant transformational changes. Those modifications that arise are based on the ideological paradigms of conservatism, liberalism, socialism, solidarism, anarchism, eco-integration, environmentalism, and the issue of ownership occupies a special place (Table 1).

**Table 1. The question of ownership of natural resources in the main ideological paradigms.** *(Source: Levenets and Shapovalov, 2011; Kyrylenko et al., 2022)*

| Ideology | Approaches to solving the issue of using natural resources | Approaches to solving the issue of ownership relations |
|---|---|---|
| Conservatism | Inadmissibility of active consumption of natural resources | Preservation of ownership of resources by state institutions |
| Liberalism | Permissibility of using natural resources within the framework of supporting ecological entrepreneurship | Granting rights to private ownership of natural resources |
| Socialism | Using natural resources without harming nature; declarativeness of equal access to natural resources | Spread of public ownership of means of production (including land) |
| Solidarity | Joint responsibility, mutual support and attention to the needs and interests of both current and future generations | Justice, equality and shared responsibility for ensuring the well-being of all members of society |
| Anarchism | Refusal to consume natural resources | Harmonization in property relations between state, private and public property |
| Eco-integration | The use of natural resources is consistent with solving global environmental problems | It is assumed that the efforts of various states will be combined with the support of the natural environment of the planet |
| Environmentalism | Radicality in the choice of approaches to the conservation of natural resources | Harmonization in property relations between state, private and public property |

Among the key factors that led to such transformations, the following can be distinguished:

1. Growing awareness of environmental problems. Over time, it has become clear that improper use of natural resources and unsustainable management can lead to serious environmental problems, such as environmental pollution, resource depletion, and destruction of natural ecosystems. This led to the emergence of environmental movements and the activation of environmental ideologies that emphasize the need for conservation and sustainable use of natural resources.
2. Development of the concept of sustainable development. The concept of sustainable development has become important for environmental and economic discussions and political decisions. This concept emphasizes the need to ensure development that meets the needs of the present generation without replacing the opportunities of future generations. It requires rational use of natural resources and environmental protection.
3. Evolution of the role of the state. In different historical periods, the role of the state in regulating ownership of natural resources has changed. From state ownership and control in socialist systems to privatization and liberalization in capitalist economies. The role of the state in environmental regulation and ensuring the sustainability of development has also undergone transformational changes, taking into account the current global challenges associated with the environmental crisis and climate change, which force governments to apply more active measures to preserve natural resources and ensure the sustainable development of the entire planet.
4. Impact of globalization. Globalization of the economy has led to an increase in international exchanges of natural resources and an increase in international environmental challenges. The interaction of countries and regions in the field of ownership of resources and relations with them was also subject to the new conditions of the globalized world.
5. Influence of economic interests. The economic interests of various subjects, such as corporations, private enterprises, and public organizations, also have a great influence on the formation of ownership of natural resources. Their attitude to the preservation of the environment and the use of resources can vary from balanced to short-term and self-interested.

All these factors, together with socio-economic changes and the development of global perception of environmental problems, lead to transformational changes in the issues of ownership of natural resources and approaches to their management, leading to the development of various ecological and economic currents and ideologies. At the same time, issues of

ownership of natural resources are considered mainly in the context of the development of rent relations or from the point of view of their use. At the same time, there are currently no issues related to the redistribution of power over natural resources.

The efficiency of their use depends on the form of ownership of natural resources. According to the provisions of the Constitution of Ukraine, natural resources are "ownership rights objects of the Ukrainian people" (Constitution of Ukraine, 1996). The specificity of ownership relations lies in the fact that natural resources, being the property of all current humanity, must be passed onto future generations in the same condition and quality (or better). In Art. 14 of the Constitution of Ukraine (1996) states that "land is the main national wealth that is under the special protection of the state". Such wording, in our opinion, has a declarative nature and reflects the general public position in terms of its content. The land fund, as such, is the property of all mankind, the task of which, in turn, is to transform the natural environment into factors of production, taking into account the optimal model of nature use.

Domestic legislation improperly regulates nature use relations from the point of view of its influence on the sustainable development of ecological and economic relations. According to the legislation, natural resources can be the object of state, private, collective or group (joint share) forms of ownership. For example, land, as an object of legal relations, is a unique natural resource that is depleted during improper use and requires significant costs to restore its fertility.

In the process of owning, using and managing natural resources, various subjects participate, and their economic interests are quite often opposite. For example, the state takes over the functions of accounting for rights and land supervision of agricultural lands, avoiding the issue of creating legal instruments for the intra-economic organization of the proper use of land plots of this category of land (Ihnatenko, 2022). Legislation in the field of land management provides for such legal instruments as land preservation, monitoring, and land management. However, in practice, these tools are not implemented for a number of reasons, although the purpose of these measures is to study the condition and use of land, planning and organization of their use. The study of this issue indicates the need to improve the current system of land management regulation. Therefore, consistently following the principles of sustainable development and the principles of ecological economy, which have been identified as key, it is necessary to take the following steps as a priority in order to achieve effective and sustainable management of land use and use of natural resources (Tretiak, 2013):

- establishment of a legally defined procedure for conducting land management;
- development of land management documentation for accounting of the modern ecological and economic state of land use and innovative support;
- creation of a technological geo-information platform for digital land use.

The primary cause of contradictions in the ownership of natural resources is the presence of divergent economic interests. That is why the question of the legality of the existence of different forms of ownership of natural resources simultaneously raises the question of determining the optimal ratio between them. At the same time, it should be taken into account that natural resources are the condition and environment of human existence - therefore, a particularly balanced and scientifically based approach is needed here.

An important condition for the effective operation of the national economy is a clear ownership or specification of property rights. Property rights researchers (Lahutin and Lebedieva (2017) and Alchian (1958)) point out that counterparties achieve the highest level of management efficiency thanks to a transparent mechanism for securing property rights, which ensures a high level of correlation between processes and their development.

The most important role in institutional support in the relations of ownership of natural resources is played by the contradiction between the private form of ownership and the need to preserve the environment from the results of management. Such results can be the consequences of the intensive and irrational implementation of economic activity: pollution of the atmosphere, water, and soil and a decrease in their fertility, the development of erosion, flooding and waterlogging, depletion of natural resources, etc., that is, a violation of the natural balance). By its very nature, private ownership of natural resources requires the maximum use of the properties of a particular resource under the condition of obtaining the greatest possible profit during its exploitation (Hutorov et al, 2021; Dvigun et al., 2022a). The paradox is related to this: on the one hand, society is interested in the existence of private ownership of land and other natural resources, since this form of ownership allows to increase in the receipt of payments to the state budget and thereby increase the well-being of every member of society, and on the other hand, it is a "threat" to the interests of society as a whole. No owner of natural resources is interested in preserving the natural environment, rational use and restoration of natural resources. As noted by Kovaliv (2022), Omelchuk et al. (2022), Melnyk et al. (2022), Oliinyk et al. (2022) and Gaman et al. (2022) informal political and business associations (oligarch clans) exploit natural resources, including the land, as if they belong to them, and which often forms a non-reproducible national capital.


DOI: 10.55643/fcaptp.6.53.2023.4233

Such a contradiction between the interests of users of natural resources on the basis of private ownership and public interests, which require the preservation of the natural environment, extends to the collective form of ownership. The role of the state in institutional provision in the relations of ownership of natural resources in the conditions of diversity of forms of ownership of natural resources is to create and shape the conditions for compliance with environmental requirements. In this case, the monopoly of state ownership of natural resources also does not allow solving the problems of effective nature management (Hutorov et al., 2019; Mulska et al., 2022; Khlopina and Gnatiuk, 2023). Here, it is important to distinguish between the economic functions of the state, on the one hand, as the owner of natural resource potential, and as the subject of managing the processes of ecological and economic interaction, on the other hand.

And, in modern conditions of military aggression, the inaction of the state, owners and users (society, people, production) allows the aggressor to violate with impunity not only the right of ownership of natural resources but also to destroy and ruin (with rockets, bombs, mines, shells, etc.) and pollute our natural objects and landscapes, soils, water sources and atmosphere with various substances (chemical, technical, bacteriological, etc.), as well as use them free of charge (extraction of natural resources from the Black Sea shelf or salt from the mines of occupied Soledar, etc.). Thus, natural resources suffer significant (and sometimes irreparable) material and environmental damage and will require significant costs for their restoration and protection in the future.

We will analyze the main types of state expenses for the protection of the natural environment, which include funds aimed at reducing or preventing environmental pollution, as well as the protection and rational use of natural resources as a result of production activities. Such costs include capital investments and current environmental protection costs. At the same time, the sources of financing capital investments can be both own funds (profit, depreciation deductions, budget financing, financing of third-party organizations as equity participation in construction, etc.), and borrowed funds (bank loans and other loan funds; grant, charity and sponsorship aid) (Table 2.).

**Table 1. Capital investments and current expenses of the state for environmental protection for the period 2016-2022, UAH million.**
*(Source: State Statistics Service of Ukraine, 2022a)*

| Indicator | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| Capital Investments: | 32488.7 | 31491.9 | 34392.2 | 43735.8 | 41332.2 | 50175.7 | 59019.2 |
| including for major repairs | 13390.5 | 11025.5 | 10074.3 | 16255.6 | 13239.7 | 13390.5 | 13541.3 |
| Current expenditures of the state | 612.7 | 1142.6 | 1214.5 | 1463.3 | 1691.2 | 1940.0 | 2167.9 |

The data in Table 2 show that the current costs of the state for the technical conversion, reconstruction and expansion of existing nature protection facilities are lower than the costs of maintenance and operation of the main means of nature protection in an already working state. A positive trend is that for the period of 2016-2022, the amount of capital investments for environmental protection was greater than the current expenditures of the state. For example, in the last analyzed period in 2022, capital investments amounted to UAH 59019.2 million, which is 27 times higher than current expenses (UAH 2167.9 million) in 2020, capital investments amounted to UAH 41332.2 million, which is 24 times higher than current expenses (UAH 1691.2 million) for the protection and rational use of the natural environment.

Capital investments and current costs of environmental protection have a tendency to constant growth (Figure 1). The directions of capital investments and current expenses are protection of atmospheric air and climate change problems; treatment of return water; waste management; protection and rehabilitation of soil, underground and surface water; reduction of noise and vibration impact; conservation of biodiversity and habitat; radiation safety; scientific and research works in nature protection direction; and other directions of environmental protection activities.

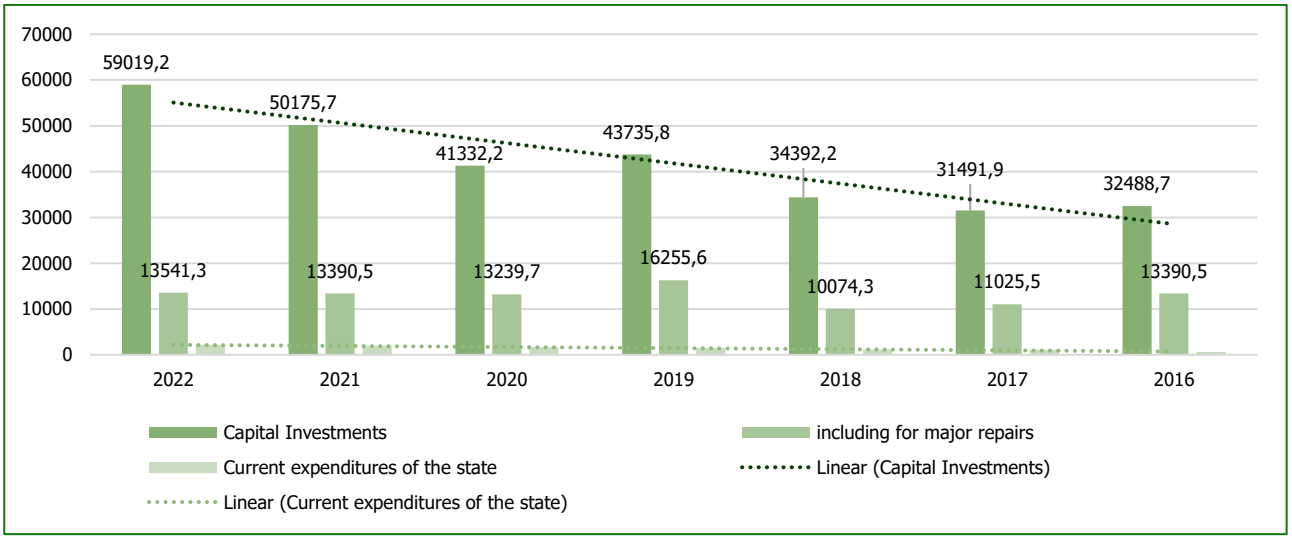


**Figure 1. Dynamics of capital investments and current expenditures of the state on environmental protection for the period 2016-2022, UAH million.** *(Source: State Statistics Service of Ukraine, 2022a)*

Thus, the amount of capital investments in 2019 compared to 2016 increased almost one and a half times and reached UAH 43735.8 million, in 2022 it decreased to UAH 59019.2 million, and in 2020 it decreased to UAH 41332.2 million. A similar growth trend can also be observed in relation to current expenses, which in 2022 reached UAH 2167.9 million, in 2020 reached UAH 1691.2 million, and in 2016 were at the level of UAH 612.7 million. In 2020, the distribution of funds from capital investments and current costs for the protection and rational use of natural resources was structured in the following directions: for the protection of atmospheric air and climate - approximately 12.0%; for the treatment of return water - approximately 30.5%; for waste management - approximately 30.7%; for the protection and rehabilitation of soil, underground and surface water - approximately 6.3%; on radiation safety - approximately - 17.5% (National Institute for Strategic Studies, 2021).

That is, for the period from 2016 to 2022, an upward trend is observed in the dynamics of capital investments and current state expenditures on environmental protection. However, a more detailed study of capital investments and funds allocated for capital repairs shows that an increase in their funding was not observed, which is due to the lack of implementation of projects for the rationalization of nature use and modernization of environmental protection infrastructure facilities. Also, no significant positive results have been achieved regarding the financing of environmental infrastructure facilities in terms of reducing emissions into the atmospheric air and preventing negative climate changes, treatment of return water, and waste management, because of real shifts in the dynamics of financing capital investments and current costs for the protection of atmospheric air and climate change was not observed.

For the period from 2016 to 2022, the growth trends of capital investments for atmospheric air protection and climate change problems were characterized by the initial trend. In 2016 capital investments for this type of environmental protection measures amounted to UAH 2502.8 million, in 2020 – UAH 5595.3 million, in 2022 – UAH 10071.54 million, i.e., increased by 2 times.

In 2016, capital investments for such type of environmental protection measures as capital investments for waste management amounted to UAH 2208.7 million, in 2019 – UAH 5754.3 million, in 2020 – UAH 2899.8 million, and in 2022 – UAH 5219.64 million. An upward trend is observed in the dynamics of the actual amount of capital investments for wastewater treatment for the period 2016-2022. In 2016, the nominal value of capital investments for wastewater treatment was 1160.1 million UAH, in 2019 – UAH 1753.8 million, and in 2020 – UAH 1578.2 million (Source: State Statistics Service of Ukraine, 2022b).

Capital investments for the protection and rational use of natural resources in the region for the period of 2016-2022 were distributed quite unevenly, and most of the funds fell on the Dnipropetrovsk, Kharkiv and Kyiv regions. During the specified period, the largest amount of capital investments in 2022, 2019, 2017 and 2016 was in the Kyiv region, and in 2020 and 2018 in the Dnipropetrovsk region, which is up to 20.0% of the amount of investments for the protection and rational use of natural resources, respectively. The analysis shows that the largest flows of capital investments at the state level for the period 2016-2022 were directed to more industrially developed regions (Figure 2).


DOI: 10.55643/fcaptp.6.53.2023.4233

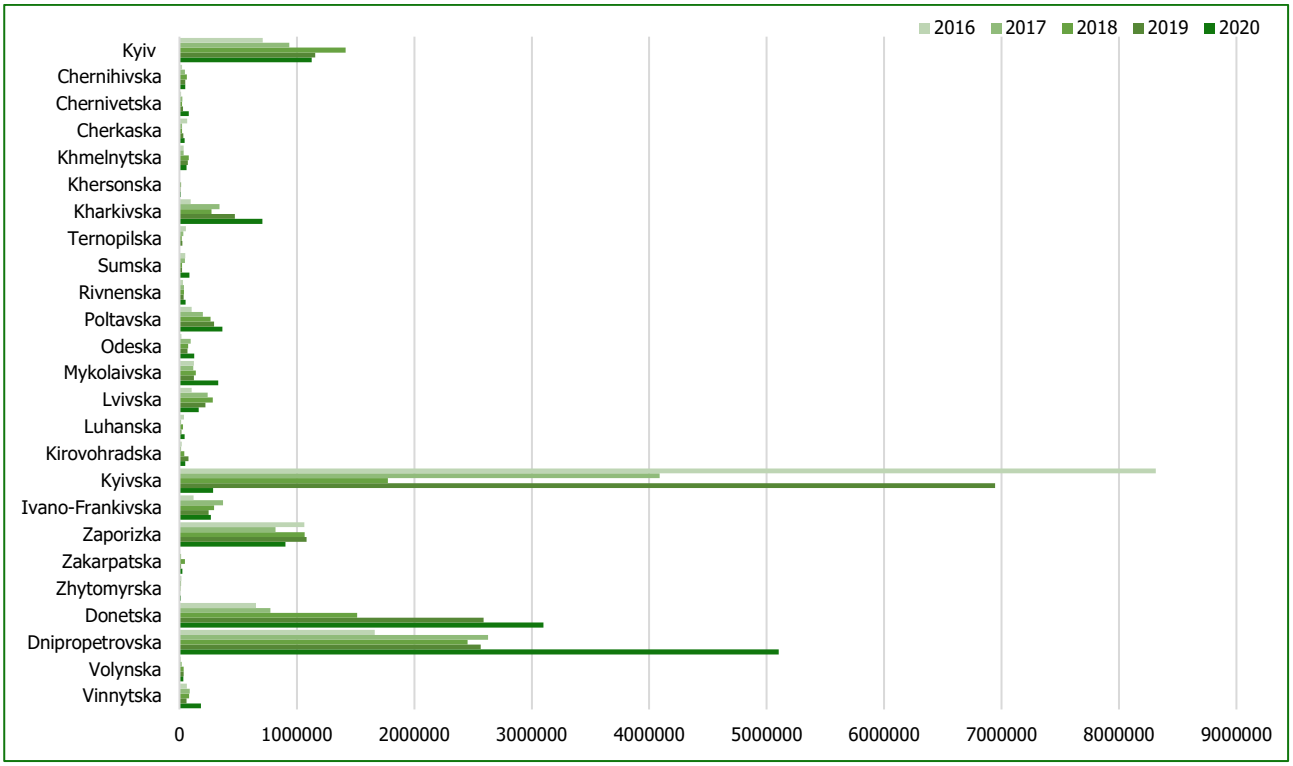


**Figure 2. Volume of capital investments for environmental protection by region in 2016-2022.** *(Source: State Statistics Service of Ukraine, 2022a)*

It should be noted that the largest increase in capital investments for the protection and rational use of natural resources in 2022 took place in the Kyiv region and amounted to UAH 10088306.0 thousand against UAH 8313266.1 thousand in 2016, and in Dnipro - UAH 5387353.0 thousand against UAH 1662257.0 thousand, respectively. The indicators of the Donetsk and Luhansk regions are not taken into account, since the given data may be unreliable due to their temporary occupation by the russian federation. As for other areas, capital investments are in slight constant fluctuations. The high resource intensity of the domestic industry is the reason for the increased need for enterprises in these regions for capital investments.

The reduction of public and private capital investments for the protection and rational use of natural resources in 2022 (compared to 2016) can be highlighted in the Cherkasy, Zhytomyr, Luhansk and Kherson regions., in 2020 (compared to 2016) can be highlighted in the Zhytomyr, Zaporizhzhya, Kyiv, Ternopil and Cherkasy regions.

Industrially developed regions include Dnipropetrovsk, Donetsk, Zaporizhzhya and Kharkiv regions, as well as the city of Kyiv, which is a fully justified step by the state as the owner of natural resources. It is in these regions that the situation regarding the "aggressive" load on the natural environment by the emissions of large industrial enterprises is the most critical. Therefore, the state, in the role of the owner and the subject of management, is engaged in maintaining the balance of the industrial load on the surrounding natural environment. Also, the tasks of the state include the issue of self-renewal and ensuring functioning, in this regard, it should be noted that in the Kyiv region, the volume of capital investments in 2022 decreased by 27 times compared to 2022 and amounted to only UAH 10088306.0 thousand, in 2020 decreased by 24 times compared to 2019 and amounted to only UAH 285410.3 thousand.

Despite the existing problems and the uneven distribution of capital investments for the protection and rational use of natural resources in the regional section, a way out of this crisis is possible. As Shevchuk (2010) notes, Ukraine has all the necessary potential to bring any industry to the international level. This requires only financial resources as a driver of economic growth. The main focus of the development of the basic sectors of the economy should be on current achievements, and the possibilities of increasing GDP, ensuring the implementation of the import substitution strategy and increasing the volume of exports. According to statistical data, as of October 1, 2022, the number of state-owned enterprises and business associations in the charter capital of which the state's share is more than 50% is 3,306 units (State Property Fund of Ukraine, 2023).

According to the data of the State Statistics Service of Ukraine, in 2021, 1956320 economic entities (of which 1585414 individuals and 370906 legal entities) were active, of which, by spheres of economic activity: in agriculture, forestry, and

fishing economy - 70803 units (individual persons-entrepreneurs - 23050 units and legal entities - 47753 units); industry - 21787 units (individual persons-entrepreneurs - 72728 units and legal entities - 49059 units); construction - 56627 units (individual entrepreneurs - 25127 units and legal entities - 31500 units) (Diia, 2022).

In 2022, due to a full-scale war, the occupation of part of the territory of Ukraine, and the destruction of natural resources, statistics on the number of economic entities decreased. Based on the positions of institutional support in the relations of ownership of natural resources and the use of natural resources in general, it is possible to distinguish the following types of business entities, presented in Figure 3.

In order to regulate ecological and economic activity in the conditions of the diversity of forms of ownership of natural resources, it is worth considering the experience of developed countries, where, starting from the middle of the 20th century, during the period of exacerbation of environmental, raw material and energy problems, the practice of state regulation of nature use was actively implemented, which later acquired a systemic nature.

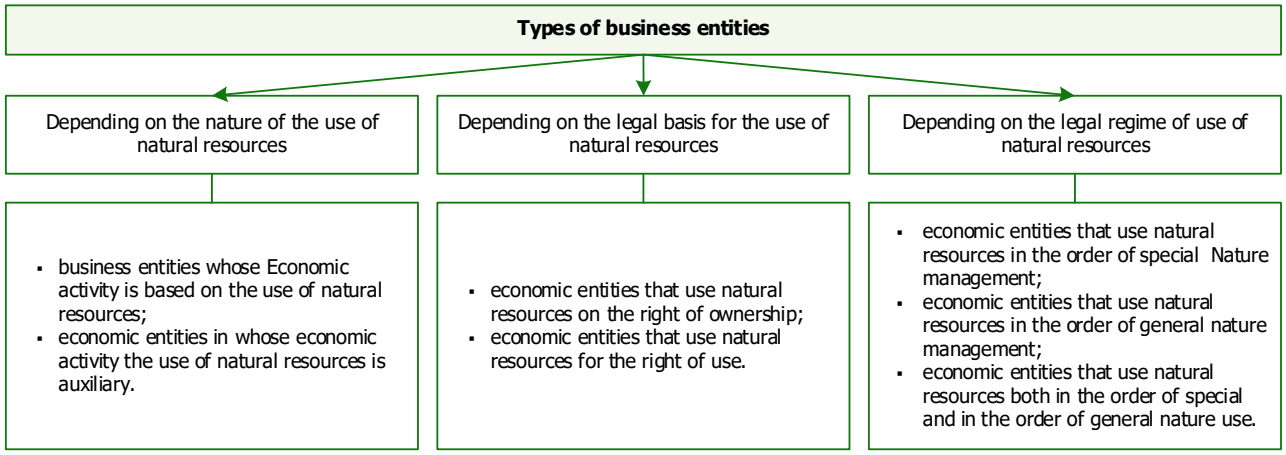


**Figure 3. Types of economic entities from the point of view of the use of natural resources.** *(Source: Shtuler, 2014; Yatsykovskyy and Holubka, 2015; Mia et al., 2022)*

The measures related to the provision of direct or indirect state aid to economic entities, regardless of the forms of ownership, have become the most widespread in global practice - these are:

- centralized or local targeted subsidies;
- direct loans for the implementation of nature protection projects and programs.

The most important principle of institutional support in relations of ownership of natural resources is the observance of the balance of economic and ecological interests of the development of society in the conditions of diversity of forms of ownership of natural resources. The balancing of these interests is achieved by putting into effect mechanisms for regulating economic activity, which are based on institutional support in relations of ownership of natural resources.

The leading role in institutional support in the relations of ownership of natural resources in developed countries belongs to the central government institutions that determine the programs that are implemented by local authorities (states, districts, lands, etc.).

The experience of the USA confirms that the institutional support in relations of ownership of natural resources became more active with the adoption of the law on the protection of soil and water resources (in 1977). On the basis of this law, the US Department of Agriculture developed and implemented a step-by-step action program based on the assessment of the state of natural resources. The main functions of institutional support in the relations of ownership of natural resources in the USA are entrusted to the authorities of states and counties. They have the right to create agricultural zones, control the sale of land plots, establish the procedure for acquiring development rights or their other use, introduce tax benefits, carry out soil protection or anti-erosion measures, etc. According to the legislation, the owner of natural resources is placed in such economic conditions that it is very unprofitable not to carry out the mentioned measures, since the provision of grants and subsidies depends on this.

Even stricter approaches to environmental "order" are applied in the EU countries, where institutional support in relations of ownership of natural resources is focused on the principle of full responsibility of the user (Dankevych et al., 2023). In accordance with this principle, the owner of a natural resource must take measures to prevent a decrease in the usefulness


DOI: 10.55643/fcaptp.6.53.2023.4233

of a natural resource. Institutional support consists of obeying the orders of the appropriate inspector who controls the state of natural resources, which is reflected in programs aimed at the financial support of the owner.

Thus, institutional support in relations of ownership of natural resources involves the use of measures of administrative and economic influence, which implement the state's environmental and economic policy in conditions of decentralization and diversity of forms of ownership of natural resources.

At the same time, despite the fact that in economically developed countries, institutional support in relations of ownership of natural resources is at a high level, the risks remain high. The reason for what is happening is the lack of responsibility for the deterioration of natural resources.

The greatest economic effect and stimulating influence, taking into account the existing foreign experience, has the use of economic and stimulating levers (preferential taxation, environmental subsidies, loans for environmental protection equipment, investment premiums, etc.). In different countries, the effect of the application of environmental taxes is not the same (Table 3).

**Table 3. Effect of the application of individual environmental taxes in foreign countries.** *(Source: Rogach, 2019)*

| Country | Type of taxes and payments | Effect |
|---|---|---|
| Denmark | Fee for waste | Increasing reuse of construction waste |
| Netherlands | Fee for waste | The level of household waste decreased by 10-20% |
| Germany | Tax on toxic waste | The level of waste storage decreased to 20–45% |
| France | Payments for pollution | There is a moderating effect because taxes are lower than the costs of abatement |
| Sweden | Carbon tax | 6% pollution reduction, tax is higher than pollution abatement costs |
| Sweden, Norway | Sulfuric anhydride tax | In Sweden, the effect is unclear, in Norway - a reduction of environmental pollution by 3–4% |

Foreign experience demonstrates that the resolution of conflicts between different forms of ownership of natural resources is effective under the conditions of institutional support in relations of ownership of natural resources. In fact, strict government regulation offers a compromise solution that involves respecting the economic and environmental interests of various owners of natural resources. The criterion for the effectiveness of institutional support in relations of ownership of natural resources is to find such a form of management, in the implementation of which each of the parties will receive maximum results in the conditions of limited natural resources, as well as in the condition of preserving the integrity and reproduction of natural systems.

The establishment of optimal institutional support in the relations of ownership of natural resources is possible on the basis of the real polly-subjectivity of the sphere of nature management. After all, the most important aspect of this process is solving the problem of the ratio of power between different levels of the state administration structure. So far, certain theoretical and practical experience has been accumulated, which allows to develop a general basis for the formation of the institutional system of ownership in the conditions of decentralization of power.

According to the existing foreign practice, under the conditions of decentralization, individual regions receive ownership of natural resources based on the conclusion of agreements (Dvigun et al., 2022b). For example, since 1974, a state-legal agreement between the Federation and the Länder has been in effect in Austria, which establishes a compromise in the distribution of power in such areas as environmental protection, energy, health care, etc. A similar practice of the distribution of powers between the centre and regions also exists in Australia, Germany, and Canada. In this case, institutional provision in the relations of ownership of natural resources expands the rights and obligations of the parties regarding the rational use of natural resources.

Such experience, in our opinion, is fully justified. After all, the theory and practice of public administration show that problems are most effectively solved where they arise. In this regard, it is advisable to delegate institutional support in relations of ownership of natural resources to localities.

In the formation of institutional support in relations of ownership of natural resources, it is important, in our opinion, to adhere to the "golden mean" when, while preserving strategic, state-wide interests in the field of use of natural resources and their reproduction, the economic interest of the subject of economic activity that directly owns property relations (enterprise or region) is not destroyed.

The most important lever in the institutional provision in the relations of ownership of natural resources for the establishment of effective relations between the state and the regions is rent payments, which perform three main functions: reproductive, fiscal and resource-saving. To date, none of these functions is performed properly in Ukraine, which is primarily due to the imbalance of state and business environmental and economic interests, the presence of contradictions in the regulatory and legal framework, etc.

## DISCUSSION

The natural resource sphere of the national economy is the largest territorial and sectoral complex, which includes systems of land, water, forest, mineral, natural and recreational and other types of resources (Mironova et al., 2022; Yuldashev et al., 2022; Revin, 2023). This diversity allows resources to be used for a variety of economic needs, including agriculture, industry, tourism, construction, energy, and other industries. The majority of researchers (Danylenko, Sokolska and Shust, 2017; Sabluk, 2015; Khvesyk and Lyzun, 2013) determine that natural resources are the basis for the functioning of the economy and for meeting the social needs of the population. However, no researcher pays attention to the issue of institutional security in the relations of ownership of natural resources. Although in the studies of Sabluk (2015), a model is proposed for the post-industrial stage of the development of Ukraine's economy in certain directions, however, the issue of state environmental and economic policy and its implementation in conditions of decentralization have not found their proper reflection. The situation is complicated by the fact that natural resources are unevenly distributed in different regions of the country. Having analyzed a large number of scientific works in this direction, we came to the conclusion that only in the writings of Libanova and Khvesyk (2014) are the issues of managing natural and land resources from the standpoint of the interests of the territorial community or the state. We welcome this approach because each region has its own natural characteristics that determine its potential and opportunities for the development of various sectors of the economy. And the use of natural resources has a significant impact on the environment (Kalina et al., 2022; Lytvyn et al., 2022; Bhuiyan et al., 2022).

In this study, we focused our attention on issues of institutional security in relations of ownership of natural resources by analyzing the main types of state expenditures for the protection of the natural environment. Despite the fact that, for the period from 2016 to 2022, in the dynamics of capital investments and current expenses of the state for environmental protection in general, an upward trend is observed, the lack of implementation of projects for the rationalization of nature use and the modernization of environmental infrastructure facilities is also noted. The main reasons for this situation include the imperfection of the state apparatus, which can jeopardize the effective use of funds allocated for environmental protection. Money can be distributed unfairly or used inefficiently, making it difficult to implement necessary projects. There are systemic problems in management and coordination between various bodies authorized to implement environmental protection measures. This can complicate the implementation of projects on the rationalization of nature use and the modernization of environmental infrastructure facilities. Government and environmental organizations may face insufficient knowledge and technological solutions to implement rationalization and modernization projects. In addition, periods of political instability often delay the making of necessary decisions and the implementation of projects for a long time (Sumets et al., 2022a; 2022b; Svyrydenko et al., 2023).

Capital investments for the protection and rational use of natural resources in the region for the period of 2016-2020 were distributed quite unevenly, and most of the funds fell on the Dnipropetrovsk, Kharkiv and Kyiv regions.

Significant positive results have not been achieved regarding the financing of environmental infrastructure facilities in terms of reducing emissions into the atmospheric air and preventing negative climate changes, treatment of return water, and waste management, because of real shifts in the dynamics of financing capital investments and current costs for atmospheric air protection and changes climate was not observed.

This approach is the fundamental basis for the formation of the institutional system of property in nature management. We believe that ensuring the rational use of resources and nature protection are becoming important aspects of sustainable development and ensuring environmental safety.

## CONCLUSIONS

In the conditions of the diversity of forms of ownership of natural resources, institutional support requires a defined state ecological and economic policy, which correlates with the processes of decentralization.


DOI: 10.55643/fcaptp.6.53.2023.4233

The question of ownership of natural resources in ecological and economic currents of various ideologies underwent significant transformational changes (conservatism, liberalism, socialism, solidarism, anarchism, eco-integration, environmentalism), which made it possible to formulate one's own approach to their definition. The conducted research and characterization of ecological and economic problems of property relations, unlike the existing ones, are focused on the problems of attracting capital investments and current costs of the state for environmental protection.

The analysis of the main types of state expenses for environmental protection, which include funds aimed at reducing or preventing environmental pollution, as well as the protection and rational use of natural resources as a result of production activities, characterizes a dual relationship to the processes taking place. On the one hand, in recent years, there has been an upward trend in the volume of capital investments and current government spending on environmental protection. However, a more detailed study of capital investments and funds allocated for capital repairs shows that an increase in their funding was not observed, which is due to the lack of implementation of projects for the rationalization of nature use and the modernization of environmental infrastructure facilities. Regionally, there is an uneven distribution of capital investments for the protection and rational use of natural resources.

Since different entities participate in the process of owning, using and managing natural resources, their economic interests are quite often opposite. Accordingly, it is substantiated that the decentralization of power is the general basis for institutional support of property relations over natural resources. And in the conditions of decentralization of power, the need to create an institutional system of ownership is well-founded. This system provides for the development of lease relationships, approaches to investment projects, improvement of natural resource taxation mechanisms by improving the system of local taxes on the use of resources, and assessment of the value of natural resources at the micro-, meso-, and macro-levels.

The ecological and economic foundations of the development of the relevant sectors of nature use, the mechanisms of the use and protection of natural resources, and the processes of capitalization of their various types must necessarily take into account the systemic aspects of the development of each component of the natural resource sphere at the local, regional and national levels.

The role of the state in the regulation of ecological and economic activity is substantiated by the state expenditures for the protection of the natural environment by species and the generalization of international experience.

Summarizing the available foreign experience with regard to the international legal framework ratified by Ukrainian legislation, we note that the regulation of ownership of natural resources in conditions of decentralization needs improvement. We have summarized the following main directions of legislative changes regarding the regulation of the activities of economic entities from the standpoint of the use of natural resources:

1. Implementation of land certification.
2. Development of environmental standards.
3. Strategy development and implementation of auxiliary projects and target programs for the development of ecological production.
4. Regulation of land management.
5. Specification of property rights to natural resources.
6. Definition of economic and stimulating levers.
7. Keeping registers of objects that have or may have a harmful effect on the environment, etc.
8. Development of methods for calculating anthropogenic impacts, criteria for selecting projects of targeted environmental (green) investments, etc.

Therefore, institutional support in relations of ownership of natural resources involves the use of measures of both administrative and economic influence, which implement the state's ecological and economic policy in conditions of decentralization and diversity of forms of ownership of natural resources.

## ADDITIONAL INFORMATION

### AUTHOR CONTRIBUTIONS

*All authors have contributed equally.*

## REFERENCES


1. Alchian, A. A. (1958). *Economic Replacement Policy.* Santa Monica, CA: RAND Corporation. https://www.rand.org/pubs/research_memoranda/RM2153.html
2. Azarov, S., & Zadunaj, O. (2020). Assessment of stability of ecosystems. *Ecological Sciences*, 1(28), 90–96. https://doi.org/10.32846/2306-9716/2020.eco.1-28.13
3. Bhuiyan, K.H., Jahan, I., Zayed, N.M., Islam, K.M.A., Suyaiya, S., Tkachenko, O., & Nitsenko, V. (2022). Smart Tourism Ecosystem: A New Dimension toward Sustainable Value Co-Creation. *Sustainability*, 14, 15043. https://doi.org/10.3390/su142215043
4. Constitution of Ukraine (1996). *The Official Bulletin of the Verkhovna Rada of Ukraine (BVR)*, 30, Art. 141. https://zakon.rada.gov.ua/laws/show/254к/96-вр/page?lang=en#Text
5. Dankevych, A., Perevozova, I., Nitsenko, V., Lozinska, L., & Nemish, Y. (2023). Effectiveness of Bioenergy Management and Investment Potential in Agriculture: The Case of Ukraine. *In: Koval, V., Olczak, P. (eds) Circular Economy for Renewable Energy. Green Energy and Technology*. Springer, Cham. https://doi.org/10.1007/978-3-031-30800-0_6
6. Danylenko, A., Sokolska, T., & Shust, O. (2017). Establishment of Land Market in Ukraine: State and Development Prospects. *Skhid*, 6, 10-16. http://nbuv.gov.ua/UJRN/Skhid_2017_6_3
7. Demchenko, N. V., & Kasatonova, I. A. (2012). Ekoloho-ekonomichna polityka y natsional'nyy mekhanizm pryrodokorystuvannya: napryamky vdoskonalennya. *Problemy i perspektyvy rozvytku pidpryyemnytstva*, 1, 31-34. http://www.nbuv.gov.ua/old_jrn/Soc_Gum/piprp/2012_1/8_Demchenko.pdf
8. Diia (2022). Number of economic entities by types of economic activity. Open data portal. https://data.gov.ua/dataset/8a59b353-f477-43de-8e23-d71af204e279
9. Dobrovolskyi, V.V. (2006). *Osnovy teorii ekolohichnykh system*. Kyiv: VD «Profesional». http://irbis-nbuv.gov.ua/ulib/item/UKR0008272
10. Dvigun, A. O., Datsii, O. I., Levchenko, N. M., Shyshkanova, G. A., & Dmytrenko, R. M. (2022a). Rational Use Of Fresh Water As A Guarantee Of Agribusiness Development In The Context Of The Exacerbated Climate Crisis. *Science and Innovation*, 18(2), 85-99. https://doi.org/10.15407/scine18.02.085
11. Dvigun, A., Datsii, O., Levchenko, N., Shyshkanova, G., Platonov, O., & Zalizniuk, V. (2022b). Increasing Ambition to Reduce The Carbon Trace Of Multimodal Transportation In The Conditions Of Ukraine's Economy Transformation Towards Climate Neutrality. *Science and Innovation*, 18(1), 96-111. https://doi.org/10.15407/scine18.01.096
12. Hutorov, A., Hutorova, O., Lupenko, Y., Yermolenko, O., & Voronko-Nevidnycha, T. (2019). Modeling of the Cycle of Reproduction Process in the Agrarian Sector of Economy (Ukraine). *Espacios*, 40(7), 19. http://www.revistaespacios.com/a19v40n07/19400719.html
13. Hutorov, A., Lupenko, Y., Sherstiuk, S., Ponomarenko, Y., Hutorova, O., & Yermolenko, O. (2021). Innovative Potential of the Agrarian Sector of Ukraine: Forming and Efficiency of Realization. *TEM Journal*, 10(3), 1228–1238. https://doi.org/10.18421/tem103-29
14. Ihnatenko, I.V. (2022). Pravovi pytannia zabezpechennia zemleustroiu yak napriamku udoskonalennia silskohospodarskoho zemlekorystuvannia. *Pravova pozytsiia,* 1 (34), 28-32. https://doi.org/10.32836/2521-6473.2022-1.5
15. Kalina, I., Khurdei, V., Shevchuk, V., Vlasiuk, T., & Leonidov, I. (2022). Introduction of a corporate security risk management system: The experience of Poland. *Journal of Risk and Financial Management*, 15(8). https://doi.org/10.3390/jrfm15080335
16. Khlopina, A., & Gnatiuk, M. (2023). Sweden's Approach to Arctic Policy: Balancing Economic Interests, Security Concerns, and Indigenous Rights. *Ukrainian Policymaker*, 12, 38-48. https://doi.org/10.29202/up/12/4
17. Khvesyk, M.A., & Lyzun, S.O. (edit.) (2013). *Modern directions of economic support of rational nature management in Ukraine*. State institution «Institute of the Natural Resources Economics and Sustainable Development of the National Academy of Sciences of Ukraine», DU IEPPS NAS of Ukraine, Kyiv, Ukraine. https://ecos.kiev.ua/share/upload/reports/Sychasni_napryamky_pryrodokorystuvannya_new.pdf
18. Kovaliv, O. (2022). Basic principles of emergency of the system of protection of property rights of the Ukrainian people to land and its natural resources. *Agroecological journal*, 1, 46-57. https://doi.org/10.33730/2077-4893.1.2022.257437
19. Kryvokulska, N. M. (2013). Ekoloho-ekonomichna polityka u systemi upravlinnia i rehuliuvannia okhorony navkolyshnoho pryrodnoho seredovyshcha.



DOI: 10.55643/fcaptp.6.53.2023.4233

*Formuvannia rynkovykh vidnosyn v Ukraini*, 4, 63-67. https://numl.org/Or1

20. Kyrylenko, Y., Kameneva, I., Popov, O., Iatsyshyn, A., Artemchuk, V., & Kovach, V. (2022). Actual Issues on Radiological Assessment for Events with Liquid Radioactive Materials Spills*. In: Zaporozhets, A. (eds) Systems, Decision and Control in Energy III. Studies in Systems, Decision and Control*, vol. 399. Springer, Cham. https://doi.org/10.1007/978-3-030-87675-3_8
21. Lahutin, V. D., & Lebedieva, L. V. (2017). «Pryroda firmy» – 80 rokiv z dnia publikatsii pratsi laureata Nobelivskoi premii z ekonomiky R. Kouza. *Istoriia narodnoho hospodarstva ta ekonomichnoi dumky Ukrainy*, 50, 307-315. http://nbuv.gov.ua/UJRN/ingedu_2017_50_19
22. Levenets, Yu., & Shapovalb. Yu. (edit.). (2011). Politychna entsyklopediia. NAN Ukrainy, In-t polit. i etnonats. doslidzh. imeni I. F. Kyiv: Parlam. vyd-vo. http://irbis-nbuv.gov.ua/ulib/item/UKR0009375
23. Libanova, E. M., & Khvesyk, M. A. (edit.) (2014). *Sotsialno-ekonomichnyi potentsial staloho rozvytku Ukrainy ta yii rehioniv: nats. dop.* NAN Ukrainy, Vid-nia ekonomiky, Derzh. ustanova «In-t ekonomiky pryrodokorystuvannia ta staloho rozvytku NAN Ukrainy». Kyiv: DU IEPSR NAN Ukrainy. http://www.nbuv.gov.ua/sites/default/files/nas_dop_2015.pdf
24. Lytvyn, N., Andrushchenko, H., Zozulya, Y. V., Nikanorova, O. V., & Rusal, L. M. (2022). Enforcement of court decisions as a social guarantee of protection of citizens rights and freedoms. *Prawo i Wiez*, 2022(39), 80-102. https://doi.org/10.36128/priw.vi39.351
25. Melnyk, D. S., Parfylo, O. A., Butenko, O. V., Tykhonova, O. V., & Zarosylo, V. O. (2022). Practice of the member states of the European Union in the field of anti-corruption regulation. *Journal of Financial Crime*, 29(3), 853-863. https://doi.org/10.1108/JFC-03-2021-0050
26. Mia, M.M., Rizwan, S., Zayed, N.M., Nitsenko, V., Miroshnyk, O., Kryshtal, H., & Ostapenko, R. (2022). The Impact of Green Entrepreneurship on Social Change and Factors Influencing AMO Theory. *Systems*, 10(5), 132. https://doi.org/10.3390/systems10050132
27. Mironova, N., Koptieva, H., Liganenko, I., Sakun, A., & Chernyak, D. (2022). Modeling the selection of innovative strategy for development of industrial enterprises. *WSEAS Transactions on Business and Economics*, 19, 278-291. https://doi.org/10.37394/23207.2022.19.268765
28. Mulska, O., Vasyltsiv, T., Shushkova, Y., Kloba, L., & Parfenyuk, Y. (2022). Assessment of the Population's Social Resilience Environment (The Case of the Carpathian Region Of Ukraine). *Problems and Perspectives in Management*, 20(1), 407-421. https://doi.org/10.21511/ppm.20(1).2022.33
29. National Institute for Strategic Studies (2021). Directions of state policy regarding the greening of the national economy. Analytical note. https://niss.gov.ua/en/node/880
30. Oliinyk, O. S., Shestopalov, R. M., Zarosylo, V. O., Stankovic, M. I., & Golubitsky, S. G. (2022). Economic security through criminal policies: A comparative study of Western and European approaches. *Revista Cientifica General Jose Maria Cordova*, 20(38), 265-285. https://doi.org/10.21830/19006586.899
31. Omelchuk, O. M., Haiur, I. Y., Kozytska, O. G., Prysiazhna, A. V., & Khmelevska, N. V. (2022). Analysis of the activities of law enforcement authorities in the field of combating crime and corruption offences. *Journal of Money Launde ring Control*, 25(3), 700-716. https://doi.org/10.1108/JMLC-07-2021-0073
32. Revin, F. (2023). Ukraine's Energy Sector Security and Sustainable Development in Light of the War with Russia. *Future Human Image*, 19, 58-65. https://doi.org/10.29202/fhi/19/8
33. Rogach, S. (2019). Foreign Experience of Regulation of Sphere of Nature Use. *Uzhorod National University Herald. International Economic Relations and World Economy*, 26(2), 54-59. http://www.visnyk-econom.uzhnu.uz.ua/archive/26_2_2019ua/12.pdf
34. Rozum, R. I., Buryak, M. V., & Lyubezna, I. V. (2015). Ecological and economic systems: basic aspects. *Naukovyi ohliad*, 6(16), 33–49. http://dspace.wunu.edu.ua/bitstream/316497/10273/1/Ekologo-ekonom-system.pdf
35. Sabluk, P. T. (2015). State and directions of development of agrarian reform. *Ekonomika APK*, 2, 10-17. http://eapk.org.ua/sites/default/files/eapk/15_02_10-17.pdf
36. Shevchuk, V. (2010). Formuvannia innovatsiinoi modeli staloho rozvytku Ukrainy v postkryzovyi period. *Ekonomichnyi chasopys –XXI,* 1–2, 6–8. http://ea21journal.world/index.php/ea-v106-02/
37. Shtuler, I. Y. (2014). Ecological and Economic Framework for Enterprise's Innovative Activities Management. *Actual Problems Of Economics*, 4, 288-293. https://eco-science.net/downloads/

38. State Property Fund of Ukraine (2023). Business entities of the state sector of the economy (state-owned enterprises, their associations, subsidiaries, and economic partnerships, the state share in the charter capital of which exceeds 50 percent), as of July 1, 2023. https://www.spfu.gov.ua/ua/content/spf-subekti-gospodaruvannya.html

39. State Statistics Service of Ukraine (2022a). Costs for environmental protection by region. https://ukrstat.gov.ua/operativ/operativ2020/ns/von_reg/arch_vorvp_u_reg.htm

40. State Statistics Service of Ukraine (2022b). Capital investments for environmental protection by types of economic activity with distribution by types of environmental protection measures. https://ukrstat.gov.ua/operativ/operativ2020/ns/kap_in/kionps_ek_u19.htm

41. Sumets, A., Kniaz, S., Heorhiadi, N., Skrynkovskyy, R., & Matsuk, V. (2022a). Methodological Toolkit for Assessing the Level of Stability of Agricultural Enterprises. *Agricultural and Resource Economics*, 8(1), 235-255. https://doi.org/10.51599/are.2022.08.01.12

42. Sumets, A., Tyrkalo, Y., Popovych, N., Poliakova, J., & Krupin, V. (2022b). Modeling of the Environmental Risk Management System Of Agroholdings Considering The Sustainable Development Values. *Agricultural and Resource Economics*, 8(4), 244-265. https://doi.org/10.51599/are.2022.08.04.11

43. Svyrydenko, D., Krokhmal, N. & Chervona, L. (2023) Social Responsibility as a Basis for Implementing the Goals of Sustainable Development in the Context of the COVID-19 Pandemic. *Philosophy and Cosmology*, 30, 77-87. https://doi.org/10.29202/phil-cosm/30/7

44. Tananaiko, T., Yatsenko, O., Osypova, O., Nitsenko, V., Balezentis, T., & Streimikiene, D. (2023). Economic Rationale for Manifestations of Asymmetry in the Global Trading System. *Sustainability*, 15, 5316. https://doi.org/10.3390/su15065316

45. Tretiak, A. M. (2013). Kontseptualni zasady «zemleustroiu – 2030». *Zemleustrìj, kadastr ì monìtorìng zemel'*, 1-2, 4-12. http://nbuv.gov.ua/UJRN/Zemleustriy_2013_1-2_3

46. Yatsykovskyy, B.I., & Holubka, S.M. (2015). Environment and Economic Development: Discourse Interdependencies and Contradictions. *Naukovyi visnyk Khersonskoho derzhavnoho universytetu*, 15(5), 104–108. http://www.ej.kherson.ua/journal/economic_15/5/30.pdf

47. Yuldashev, O. K., Khomiachenko, S. I., & Yuldashev, S. O. (2022). Organizational and Legal Model of Competency-Based Education as a Means of the Transition to Innovative Economy. *Danube*, 13(2), 107-118. https://doi.org/10.2478/danb-2022-0007

48. Zarzhytskyi, O. S. (2012). *Aktualni problemy pravovoho zabezpechennia ekolohichnoi polityky Ukrainy (teoretychni aspekty)*: monohr. D.: Natsionalnyi hirnychyi universytet. https://core.ac.uk/download/pdf/48401788.pdf

*Артюшок К., Верстяк А., Кравчук П., Дорофєєв О., Польова О., Капеліста І.*

## ІНСТИТУЦІЙНЕ ЗАБЕЗПЕЧЕННЯ У ВІДНОСИНАХ ВЛАСНОСТІ НА ПРИРОДНІ РЕСУРСИ: ДЕРЖАВНА ЕКОЛОГО-ЕКОНОМІЧНА ПОЛІТИКА ТА ДЕЦЕНТРАЛІЗАЦІЯ

У статті визначено природно-ресурсну сферу національної економіки як найбільший територіально-галузевий комплекс, який включає земельні, водні, лісові, мінеральні, природно-рекреаційні та інші види ресурсів. Установлено відсутність упровадження виділення достатньої кількості коштів, спрямованих на раціоналізацію природокористування та модернізацію об'єктів природоохоронної інфраструктури, а також нерівномірний розподіл капітальних інвестицій на охорону та раціональне використання природних ресурсів у регіональному розрізі за 2016-2022 роки. Обґрунтовано, що в умовах децентралізації владних повноважень загальним базисом інституційного забезпечення відносин власності на природні ресурси повинні стати корпоратизація, розвиток рентних відносин, удосконалення фіскальних механізмів у ресурсокористуванні, ринково-економічне оцінювання та капіталізація всіх без винятку природних ресурсів на місцевому, регіональному й національному рівнях. Поглиблено теоретичні засади проблем інституційного забезпечення у відносинах власності в умовах децентралізації владних повноважень шляхом визначення необхідності створення інституційної системи власності. Ця система передбачає розвиток відносин оренди, підходів до інвестиційних проєктів, поліпшення механізмів оподаткування природокористування шляхом удосконалення системи місцевих податків на використання ресурсів, проведення оцінки вартості природних ресурсів на мікро-, мезо- та макрорівнях. Сформульовано визначення еколого-економічних проблем відносин власності, які, на відміну від існуючих, зосереджені на проблемах залучення капітальних інвестицій і поточних витрат держави на охорону навколишнього природного середовища в умовах децентралізації, а також засадничого базису формування


DOI: 10.55643/fcaptp.6.53.2023.4233

інституційної системи власності в природокористуванні з урахуванням зарубіжного досвіду. Результати дослідження можуть бути використані в розробці регіональних і національних програм та прогнозів із питань природокористування й охорони навколишнього середовища.

**Ключові слова:** еколого-економічні відносини, власність, природні ресурси, капітальні інвестиції, державне регулювання

**JEL Класифікація:** H82, L72, N50, Q13, Q20