


PUBLIC-PRIVATE PARTNERSHIPS IN NATURAL RESOURCE MANAGEMENT AS A BASIS FOR THE IMPLEMENTATION OF THE ECOLOGICAL AND ECONOMIC SECURITY DOCTRINE OF UKRAINE'S DEVELOPMENT

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 03 March 2023</p> <p>Accepted 29 May 2023</p>	<p>Purpose: This article aims to identify the main tendencies and features of public-private partnerships in the environmental sphere regarding developing environmental and economic security in Ukraine.</p>
<p>Keywords:</p> <p>Public-Private Partnership; Eco-Friendly Technologies; Natural Resources Management; Ecological and Economic Security; Unsustainable Use of Natural Resources.</p>	<p>Theoretical framework: Business cost savings when implementing the latest technologies in pursuit of economic results are accompanied by a deterioration of the environmental situation at the regional and national levels, increased risks of negative impact on population health, and reduced labor productivity, which, accordingly, causes a potential increase in public healthcare costs. As a result, the search for forms and methods to ensure effective cooperation between the state and business in solving natural resources management problems is intensifying.</p>
	<p>Design/methodology/approach: The study used analytical and bibliographic methods to study the scientific literature on implementing the ecological and economic security doctrine and the features of various types of public-private partnerships related to it, as well as induction, deduction, analysis, synthesis of information, systemic and structural, comparative, logical, and linguistic methods, abstraction, idealization for studying and processing data, and a questionnaire survey conducted by the research authors online to clarify the most critical issues related to this issue practically.</p>
	<p>Findings: The study identified the principal and most important theoretical aspects of public-private partnership issues in the environmental sector.</p>
	<p>Research, Practical & Social implications: Also, it examined the opinion of representatives of public environmental organizations and executives of local government departments on the critical aspects of the problem.</p>
	<p>Originality/value: One of the most effective forms of combining the efforts of all stakeholders is a public-private partnership, which in a market economy allows</p>

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directing limited resources of business and the state to solve the most pressing problems of both certain regions and the country as a whole through the mechanism of joint implementation of socially significant projects.

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PARCERIAS PÚBLICO-PRIVADAS NA GESTÃO DE RECURSOS NATURAIS COMO BASE PARA A IMPLEMENTAÇÃO DA DOCTRINA DE SEGURANÇA ECOLÓGICA E ECONÔMICA DO DESENVOLVIMENTO DA UCRÂNIA

RESUMO

Objetivo: este artigo tem como objetivo identificar as principais tendências e características das parcerias público-privadas na esfera ambiental em relação ao desenvolvimento da segurança ambiental e econômica na Ucrânia.

Estrutura teórica: A economia de custos das empresas ao implementar as tecnologias mais recentes em busca de resultados econômicos é acompanhada por uma deterioração da situação ambiental nos níveis regional e nacional, maiores riscos de impacto negativo sobre a saúde da população e redução da produtividade do trabalho, o que, conseqüentemente, causa um possível aumento nos custos de saúde pública. Como resultado, a busca por formas e métodos para garantir uma cooperação eficaz entre o Estado e as empresas na solução de problemas de gerenciamento de recursos naturais está se intensificando.

Projeto/metodologia/abordagem: O estudo utilizou métodos analíticos e bibliográficos para estudar a literatura científica sobre a implementação da doutrina de segurança ecológica e econômica e as características de vários tipos de parcerias público-privadas relacionadas a ela, bem como indução, dedução, análise, síntese de informações, métodos sistêmicos e estruturais, comparativos, lógicos e linguísticos, abstração, idealização para estudar e processar dados, e uma pesquisa por questionário realizada pelos autores da pesquisa on-line para esclarecer as questões mais críticas relacionadas a esse assunto na prática.

Resultados: O estudo identificou os principais e mais importantes aspectos teóricos das questões de parceria público-privada no setor ambiental.

Implicações sociais, práticas e de pesquisa: Além disso, o estudo examinou a opinião de representantes de organizações ambientais públicas e executivos de departamentos do governo local sobre os aspectos críticos do problema.

Originalidade/valor: Uma das formas mais eficazes de combinar os esforços de todas as partes interessadas é a parceria público-privada, que, em uma economia de mercado, permite direcionar os recursos limitados das empresas e do Estado para resolver os problemas mais urgentes de determinadas regiões e do país como um todo por meio do mecanismo de implementação conjunta de projetos socialmente significativos.

Palavras-chave: Parceria Público-Privada, Tecnologias Ecologicamente Corretas, Gestão de Recursos Naturais, Segurança Ecológica e Econômica, Uso Insustentável de Recursos Naturais.

LA COLABORACIÓN PÚBLICO-PRIVADA EN LA GESTIÓN DE LOS RECURSOS NATURALES COMO BASE PARA LA APLICACIÓN DE LA DOCTRINA DE LA SEGURIDAD ECOLÓGICA Y ECONÓMICA DEL DESARROLLO DE UCRANIA

RESUMEN

Objetivo: Este artículo pretende identificar las principales tendencias y características de la colaboración público-privada en el ámbito medioambiental en relación con el desarrollo de la seguridad ecológica y económica en Ucrania.

Marco teórico: El ahorro de costes de las empresas al aplicar las últimas tecnologías en busca de resultados económicos va acompañado de un deterioro de la situación medioambiental a escala regional y nacional, mayores riesgos de impacto negativo en la salud de la población y menor productividad laboral, lo que en consecuencia provoca un posible aumento de los costes de la sanidad pública. En consecuencia, se está intensificando la búsqueda de formas y métodos que garanticen una cooperación eficaz entre el Estado y las empresas para resolver los problemas de gestión de los recursos naturales.

Diseño/metodología/enfoque: El estudio utilizó métodos analíticos y bibliográficos para estudiar la literatura científica sobre la aplicación de la doctrina de la seguridad ecológica y económica y las características de los diversos tipos de asociaciones público-privadas relacionadas con ella, así como métodos de inducción, deducción, análisis, síntesis de información, sistémicos y estructurales, comparativos, lógicos y lingüísticos, abstracción, idealización para estudiar y procesar datos, y una encuesta por cuestionario realizada por los autores de la encuesta en línea para aclarar las cuestiones más críticas relacionadas con este tema en la práctica.

Resultados: El estudio identificó los principales y más importantes aspectos teóricos de la problemática de la colaboración público-privada en el sector medioambiental.

Implicaciones sociales, prácticas y de investigación: Además, el estudio examinó las opiniones de representantes de organizaciones públicas de medio ambiente y ejecutivos de departamentos de la administración local sobre los aspectos críticos de la cuestión.

Originalidad/valor: Una de las formas más eficaces de combinar los esfuerzos de todas las partes interesadas es la asociación público-privada, que, en una economía de mercado, permite dirigir los limitados recursos de las empresas y el Estado a resolver los problemas más urgentes de determinadas regiones y del país en su conjunto mediante el mecanismo de ejecución conjunta de proyectos socialmente significativos.

Palabras clave: Asociación Público-Privada, Tecnologías Ecológicamente Correctas, Gestión de los Recursos Naturales, Seguridad Ecológica y Económica, Uso Insostenible de los Recursos Naturales.

INTRODUCTION

The institutional transformation of the Ukrainian economy toward its ecological development currently needs to be sufficiently targeted due to imperfections, contradictions, and inefficiencies in the existing mechanisms.

An effective public-private partnership aimed at ensuring the development of the environmental sector is a tool for achieving national goals and a prerequisite for successful public policy from the spatial and sectoral perspectives. Today, the existence of a sufficient number of institutional mechanisms for public-private partnerships at the international level necessitates the creation of appropriate infrastructure at the level of certain countries.

The theoretical part of this study substantiates the importance of the issue raised. Also, it describes the concept, components, and main tendencies of public-private partnerships for the ecological and economic security of Ukraine's development.

The practical part of the study includes an assessment of the negative tendencies in natural resources management as a prerequisite for the intensification of public-private partnership in Ukraine, key problematic issues in the field of natural resources management which the subjects of public-private partnerships are trying to solve during their cooperation, the severity of functioning indicators of institutional support for public-private partnerships, and an assessment of the most effective and popular forms of public-private collaboration for improving ecological and economic security.

Following the study results, the authors conclude the issues raised. In particular, it has been found that today the most critical prerequisites for intensifying public-private partnerships in the field of ecological and economic security are certain negative tendencies in natural resource management, namely, changes in the hydrogeological state of rivers, as well as mining, transportation, and processing of mineral resources. At the same time, the key problematic issues in the field of natural resources management that public-private partnerships are trying

to solve in their interaction are processes that reflect the backlash of the ecological subsystem to the previous impact of the economy, as well as the depletion of natural resources and the decline in their quality. At the same time, the most important indicators of the institutional support of public-private partnerships functioning are the quality of the legal and regulatory framework for cross-border cooperation in the field of environmental management and property rights protection. Finally, the questionnaire showed that the most effective and popular forms of public-private collaboration in practice include cooperation through the conclusion of specific cooperation agreements and the establishment and development of mutually beneficial contracts between the subjects of public-private partnerships.

LITERATURE REVIEW

A public-private partnership is a legal arrangement between the public and private sectors under which private or public companies undertake to provide or finance services traditionally provided by public institutions. Private-public partnerships bring the interests of the state and business closer together, as many projects in which both parties are interested can only be implemented by combining their resources and skills (Mishenina & Dvorak, 2022), (Yukhymenko, 2022).

The current socio-economic situation in Ukraine is characterized by a downward tendency of labor outflow abroad, which leads to a decrease in the level of economic security for citizens (Tsymbalenko, Tarasenko & Bielialov, 2018).

Achieving sustainable development goals at the global level requires combining efforts at all public administration levels and using various forms of interaction between government and business. Public-private partnerships are characterized as a form of global environmental governance. In their studies, scientists prove that the collaboration of participants in such cooperation usually yields much better results than implementing the ecological policy by individual companies or the state. Researchers are studying the theoretical and organizational issues of public-private partnerships in natural resources management, their feasibility, and their effectiveness in depth. However, at this stage, it is equally important to study the prerequisites, mechanisms of application, and effectiveness of such partnerships in natural resources management. This area is only partially represented in scientific researches (Castanho, Gómez & Kurowska-Pysz, 2019), (Hellowell, 2019).

The natural resource management sector is characterized by social and environmental infrastructure facilities and natural resources being mainly in the state or municipal ownership.

Therefore, it is advisable to deepen scientific investigations in the field of natural resources management in Ukraine, taking into account foreign experience and strategic tasks in the field of ecology to ensure further development of the national economic and social sphere (Theilbro, Bjärstig & Eckerberg, 2018), (Smith & Thomasson, 2018).

Traditionally, scientific literature mentions many advantages of using the public-private partnership mechanism at the municipal, regional, and state levels. The main ones are attracting investments, risk sharing, solving socio-economic and infrastructure problems, creating new jobs, etc. The ultimate goal of public-private partnerships is to achieve the best services value for money. A correctly implemented public-private collaboration is believed to reduce costs over the project life cycle, better spread risks, accelerate the delivery of public works and services, improve the quality of the service, and create additional revenue sources (Hossu et al., 2018).

The state environmental policy aims to solve the problems of irrational use of natural resources and environmental pollution by emissions. Still, their implementation depends on enterprises' interest and economic capacity to finance nature protection measures and implement eco-friendly technologies (Ciot, 2022).

We should note the low flexibility of many modern enterprises that have long chosen a conservative development path and do not see an urgent need to develop and implement new ideas, technologies, and ways of cooperation (Bielialov, 2022).

Since public pressure to increase the ecological responsibility of business is growing, and corporate sustainability reporting is becoming a necessary form of transparency to all stakeholders on issues related to environmental progress, a significant number of Ukrainian companies postpone active solutions to strategically important environmental problems (Hassen & Bilali, 2022).

Forming new forms of public-private partnerships in natural resources management is highly relevant in such circumstances, requiring organizational and informational grounding and accelerated implementation (Bentley, 2022).

This type of partnership project can solve a range of socio-environmental and economic problems of regional communities, namely: "nature sustainability, natural resource management, natural resource consumption, recreation, transformation or improvement of natural facilities" (Maurer, Whitman & Wright, 2023).

This research aims to determine the position of public environmental organizations representatives and executives of local government departments on the specific features of public-private partnerships in the nature protection sector.

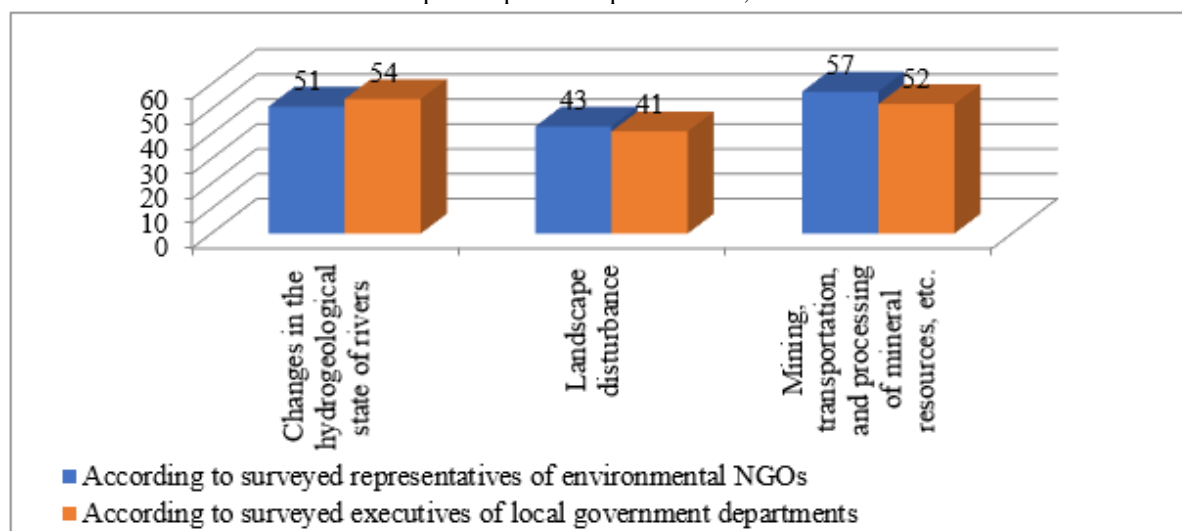
MATERIALS AND METHODS

A practical study of current tendencies in public-private partnerships in the field of natural resources management was conducted by interviewing 211 representatives of public environmental organizations and 317 executives of local government departments in Vinnytsia, Rivne, Chernihiv, Zhytomyr and Kyiv regions of Ukraine. The survey was conducted using the Survey Planet service.

RESULTS

According to the survey participants, today, in the context of the particular urgency of environmental protection issues, the essential prerequisites for intensifying public-private partnerships in ecological and economic security development are specific negative tendencies in natural resources management (Figure 1).

Figure 1. Negative tendencies in natural resource management as a prerequisite for the intensification of public-private partnership in Ukraine, %.

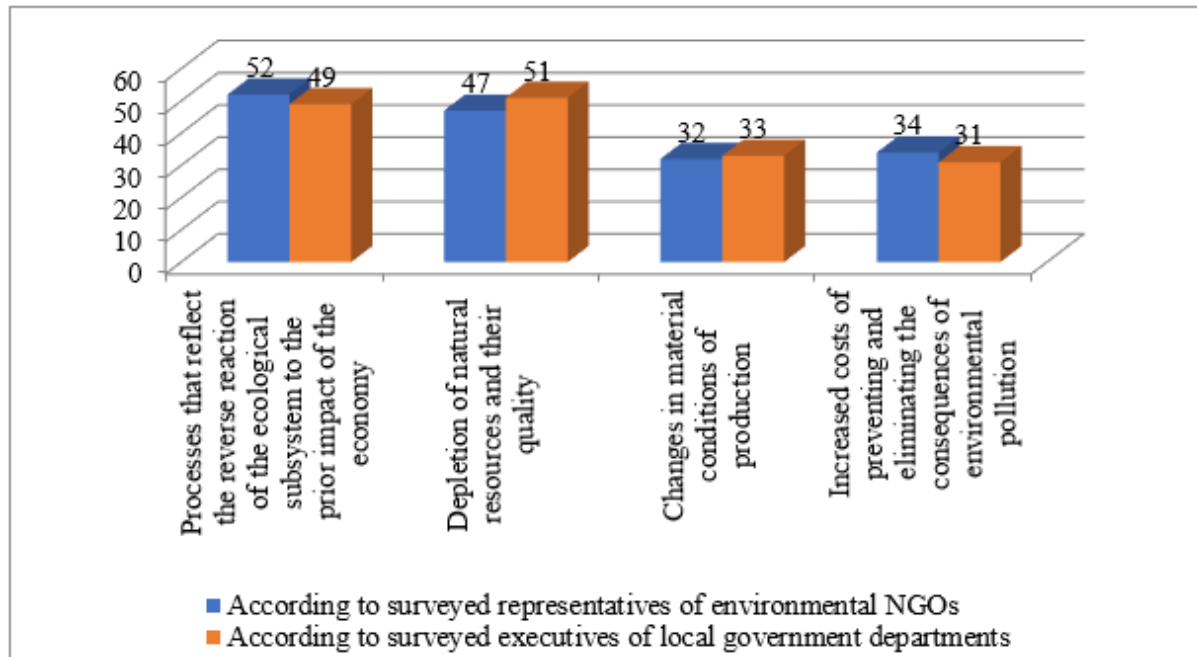


Source: compiled by the authors.

The survey has shown that the most essential prerequisites for this process are changes in the hydrogeological state of rivers and the mining, transportation, and processing of mineral resources.

The respondents identified the following critical issues in the field of natural resources management that public-private partnerships are trying to solve during their cooperation (Figure 2).

Figure 2. Critical problematic issues in the field of natural resources management that public-private partnerships are trying to solve during their cooperation, %.



Source: compiled by the authors.

As shown in Figure 2, the main problems addressed in implementing public-private partnership programs or activities are processes that reflect the backlash of the ecological subsystem to the previous economic impact, as well as the depletion of natural resources and a decline in their quality.

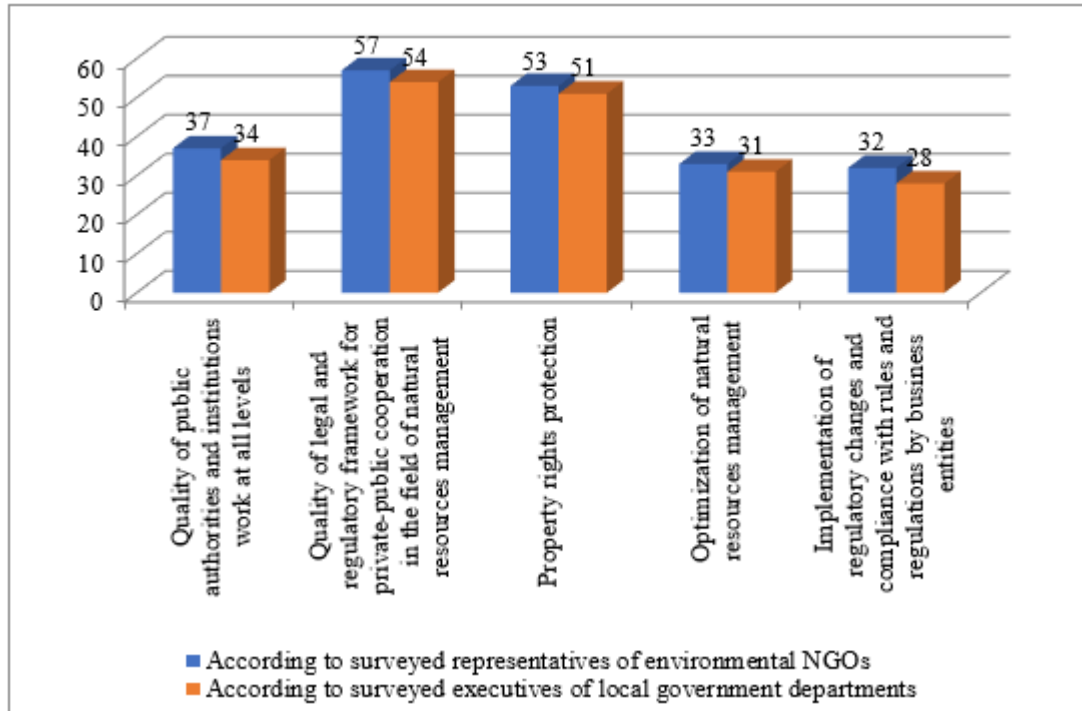
The institutional and legal framework for public-private cooperation is a system of norms, restrictions, and rules established by the government and legal organizations. According to the survey participants, the most important indicators of the functioning of the institutional support for public-private partnerships are (Figure 3):

- quality of the legal and regulatory framework for transboundary cooperation in the field of environmental management;
- protection of property rights.

The respondents were asked to name the forms of public-private cooperation that are the most effective and popular in their practical activities (Figure 4):

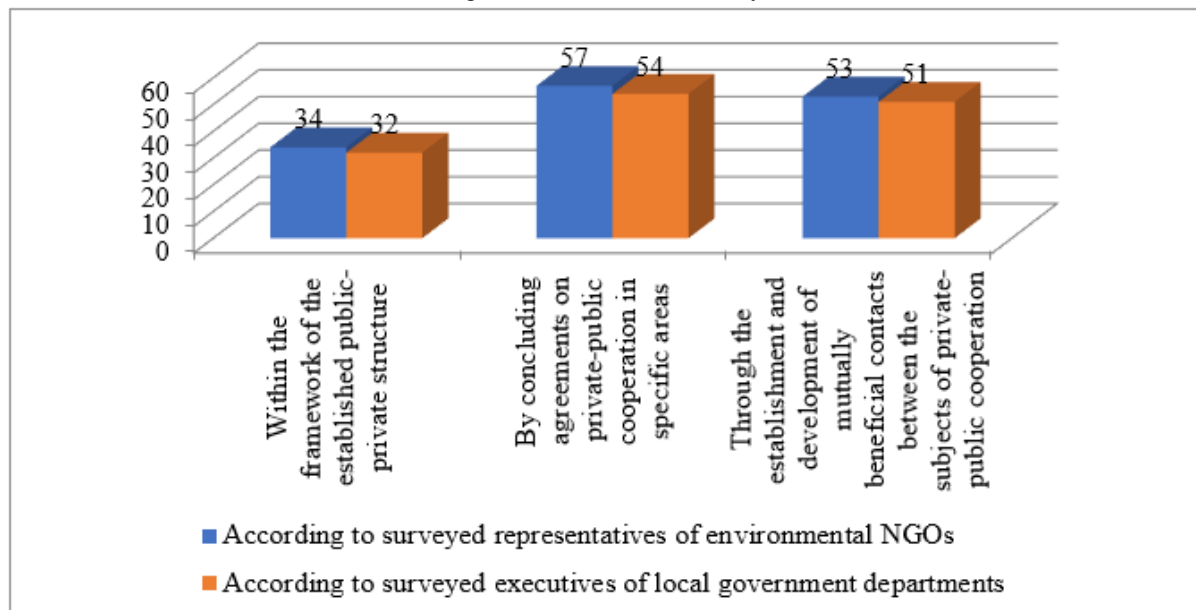
As seen from Figure 4, these forms include collaboration through signing partnership agreements in specific spheres and establishing and developing mutually beneficial treaties between private-public cooperation entities.

Figure 3. Indicators of functioning of institutional support for public-private partnerships, %



Source: compiled by the authors.

Figure 4. Forms of public-private cooperation that are the most effective and popular for improving the country's ecological and economic security, %.



Source: compiled by the authors.

DISCUSSION

There was no partnership in an administrative economy with absolute state dominance. Instead, the rapid development of economic and social system efficiency was characterized by the pairwise interaction of innovation system participants: businesses, government, universities, and research organizations. In a post-industrial economy, it is believed that overcoming the decline in productivity is possible through the network interaction of four types of participants. Nowadays, developed economies have long been using the triple helix model for economic development, while many emerging markets operate based on a partnership between the state and business (Megits et al., 2021).

Studying the mutual influence of two significant economic development factors, such as the effectiveness of government policy and business structure activities, is very interesting and relevant to the current economic situation (Solodovnik et al., 2021), (Biswas et al., 2018).

Summarizing the analytical studies conducted in Ukraine, it is advisable to highlight the following main features of the public-private partnership process: low attractiveness due to low business awareness of such cooperation benefits, fragmentation of activities, low degree of their implementation and completion, and the industry's focus on infrastructure projects. Furthermore, regarding natural resources management, scientists identify the need for more competitiveness as one of the main obstacles to ensuring the effectiveness of public-private partnerships (Ha & Shin, 2022), (Lukin, 2019).

The successful implementation of ecological and economic security as a key direction of state and corporate governance is important for the innovative development of any country. Knowledge management strategies in this area are extremely necessary to ensure innovation (Koshelieva et al., 2023).

The industry needs help to solve the problem of reducing the negative environmental impact. The production of waste and pollution emissions have increased significantly in recent years. Moreover, capital investments in environmental protection could be more stable and meet the current needs of technological modernization. In general, the level of man-caused environmental pollution in Ukraine is several times higher than in developed countries. Consequently, an essential mechanism for shifting the problems of natural resource management should be the implementation of public-private partnership agreements (Lkhaajav, 2022), (Semenenko et al., 2018).

When studying the practices of effective nature management, it is worth noting that the use of the latest technical and technological means (such as energy-saving heating and water

supply devices) and the use of the latest communication tools, which enable effective cooperation between the subjects of management of the efficiency of nature management, are of great importance. namely, state bodies, private companies, public organizations, etc (Filyushina et al., 2023).

Public-private partnerships as an effective mechanism for combining state and business efforts to address pressing issues of national economic development related to specific industries or regions have proven to be effective globally and are widely used in many countries. In addition to infrastructure and social projects, the government and businesses jointly implement ecological policy by improving energy efficiency and natural resources management in general. Existing good practices require large-scale project-specific studies to identify conditions and mechanisms for overcoming existing barriers. However, despite the existing legislative framework, public-private partnerships in Ukraine have developed somewhat fragmented: few agreements have been made, which have mostly been put on hold (Mia et al., 2022), (Papageorgiou et al., 2018).

A significant number of ongoing public-private partnership projects are being implemented in the following sectors: electrical energy distribution and supply, thermal energy production, transportation and supply, natural gas distribution and supply, water collection, purification and distribution, and wastes disposal, but this does not lead to solving environmental problems at the regional level (Diphorn & van Stapele, 2021), (Bratko, 2022).

CONCLUSION

Thus, in accordance with the set goal, the main trends and features of private-state partnership in the field of environmental protection were highlighted in the research process from the point of view of the need to strengthen ecological and economic security in Ukraine. The analysis of the scientific literature on the research topic and the results of the questionnaire survey showed that the environmental situation in many regions of Ukraine, irrational use of natural resources in manufacturing, unsystematic waste management, and the lack of a clear state ecological policy actualize the process of creating and ensuring the effective functioning of public-private partnerships. The conducted studies also point to the need to develop and implement a common national ecological and economic security doctrine of economic development, which would include, among other things, the use of a set of mechanisms and tools to direct the efforts of the state and the national economy to systematically and gradually address existing environmental problems. The limitations that take place in the process of

conducting the survey relate to the geographical boundaries of the respondents' professional activity and the list of problems and issues in the field of nature management that were given attention. Prospects for future research in this field may involve studying the possibilities of using the latest information and communication technologies, as well as new technical developments, provided that international structures, government institutions and business interact in solving the problems of responsible environmental management.

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