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Editors office address:

National University of Life and Environmental Sciences of Ukraine
03041, 15 Heroiv Oborony Str., Kyiv, Ukraine
E-mail: info@environmentalscience.com.ua
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Food sovereignty: Balancing economic security and the right to a clean environment

Yevhen Novikov*

PhD in Law, Doctoral Student

Yaroslav Mudryi National Law University

61024, 77 Hryhorii Skovoroda Str., Kharkiv, Ukraine

<https://orcid.org/0000-0002-6085-8258>

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Abstract

This study aimed to comprehensively analyse the legal mechanisms for integrating environmental standards into the assurance of economic stability and food security. A detailed analysis of the legal acts of the European Union, particularly those of its member state Poland, and Ukraine was undertaken, focusing on laws governing agricultural subsidies, environmental standards, and food safety. The findings revealed that current Ukrainian legislation fails to adequately integrate environmental approaches into mechanisms supporting the development of the agricultural sector. Specifically, the lack of mandatory environmental criteria for granting subsidies creates conditions for the use of outdated and environmentally harmful farming methods. Insufficient regulation in the area of agrochemicals leads to significant environmental risks, including soil degradation and water pollution, which infringes upon the right to a clean environment. The analysis of the product traceability system revealed its fragmentation, which increases the risks of product loss at various stages of supply. The study showed that a significant portion of agricultural product losses is due to insufficient infrastructure for storage and transportation, which exacerbates food instability. The importance of international organisations, such as the Food and Agriculture

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*Corresponding author

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Organization, was highlighted for their role in providing recommendations to address these gaps through the implementation of innovative approaches. The need to integrate environmental criteria into state subsidy mechanisms, align national legislation with international standards, and improve traceability systems and storage infrastructure was identified as crucial in enhancing food security. The results outlined potential reform directions that could ensure balanced development of the agricultural sector, increase food stability, and support the preservation of natural resources in the current global context

Keywords: food security; environmental security; sustainable development; legal regulation; Ukraine; Poland; EU

Introduction

The issue of food security is one of the key components in ensuring a country's economic security, especially in the context of increasing environmental and climate challenges. The depletion of natural resources, soil degradation, excessive use of pesticides and fertilisers, and climate change hinder the sustainable development of the agricultural sector and limit people's access to food. In Ukraine, these challenges are compounded by an underdeveloped legal framework that needs to integrate economic and environmental aspects, significantly complicating the realisation of food sovereignty. In particular, legal mechanisms that could effectively ensure food security do not sufficiently consider environmental criteria, creating risks for the environment and economic stability. Similar problems have been faced by other Eastern European countries that have had significant dependence on agricultural production, especially during the adaptation of their national agricultural sectors to European environmental standards.

The role of the state in developing the agricultural sector is fundamental to ensuring economic stability, particularly in the face of contemporary challenges. Studies by O. Bazaluk *et al.* (2020) and Y. Koverko *et al.* (2020) have analysed legal mechanisms aimed at stimulating agricultural production. The research has shown that financial support plays a significant role in developing the agricultural sector, opening up avenues for

increasing its productivity. However, these studies have focused exclusively on the economic component, without considering environmental aspects. In particular, the question remains of how government support can stimulate a reduction in negative environmental impacts through the implementation of sustainable practices such as organic farming or reducing greenhouse gas emissions. Therefore, it is important to develop legal mechanisms that ensure both economic stability and environmental sustainability.

The issue of food security has become particularly pressing due to climate change and intensifying global challenges. As I. Yakovyuk and M. Pasat (2023) note, supporting local production and developing infrastructure are key factors in achieving a country's food independence. However, their approach is largely focused on the economic component, limiting the consideration of environmental standards in legal initiatives. For instance, there are no specific approaches developed for integrating environmental requirements into incentives for the agricultural sector, particularly regarding the creation of a legal framework for regulating the use of natural resources or reducing the agrochemical impact on the environment. These issues require detailed research and the implementation of effective mechanisms in national legislation.

In the study of T. Mostenska *et al.* (2022), the focus is placed on the financial aspects of ensuring

economic stability in the food sector. Meanwhile, the environmental challenges caused by the excessive use of agrochemicals, which affect the environment, public health, and the availability of food, remain outside the scope of their analysis. This highlights the need to integrate environmental standards into national food policy strategies, particularly through the development of clear regulatory mechanisms that will contribute to reducing the negative impact of agrochemicals and rational use of natural resources.

The research by K. Utenkova *et al.* (2020) focuses on the development of the agricultural sector as a key factor in ensuring Ukraine's economic and food security. While the authors emphasise the importance of agricultural modernisation, the environmental aspects of integrating international approaches remain insufficiently explored. This necessitates the development of legal mechanisms that would ensure the implementation of environmental standards in national practices, such as reducing the negative impact of the agricultural sector on the environment and preserving biodiversity.

I. Kulchiy (2020) and K. Fen *et al.* (2020) examined aspects of strengthening the economic security of the agricultural sector and food industry in the context of European integration. Although the authors emphasise the importance of adapting European standards, they do not propose clear legal mechanisms for their implementation, taking into account the specific features of Ukraine's agricultural sector and the challenges associated with environmental aspects. Therefore, a pressing issue is the creation of specific legal mechanisms that consider the specifics of the Ukrainian agricultural sector and environmental challenges, ensuring the integration of European standards into national legislation. This is due to the fact that the legal regulation of food systems requires a closer connection with international standards that ensure the harmonisation of environmental and economic requirements.

Ensuring food security in Ukraine is a crucial task that requires a systemic review of agricultural regulations. In the article of I. Yakovyuk *et al.* (2023), the importance of international initiatives such as the Black Sea Grain Initiative for ensuring global food access is emphasised. The authors also drew attention to the problems of transport logistics, in particular the high cost and inefficiency of land routes compared to sea routes. However, the aforementioned study also lacks an analysis of the legal mechanisms that could contribute to the integration of environmental standards into Ukrainian national legislation.

Thus, in Ukrainian science, the issue of implementing environmental standards in the legal provision of food security remains insufficiently studied. The aim of this study was a comprehensive analysis of legal mechanisms that contribute to the harmonisation of the requirements of economic and environmental security in the context of ensuring food security in Ukraine. The objectives were to study the current state of Ukrainian legislation, compare it with the legislation of the EU and its individual member states, and identify directions for improving legal regulation.

Materials and Methods

A comparative analysis of the legislation of Ukraine, Poland, and the EU was conducted to systematically examine regulations concerning food quality, agricultural production, and environmental protection. The study began by examining the Declaration on State Sovereignty of Ukraine (1990), which outlined the conceptual foundations of food sovereignty in the context of independent management of national resources. Subsequently, key Ukrainian legislative acts were analysed, including Law of Ukraine No. 771/97-VR "On Basic Principles and Requirements for Food Safety and Quality" (1997), which was used to evaluate the existing food safety system, particularly regarding quality control procedures

and adherence to environmental standards during production; Law of Ukraine No. 1877-IV "On State Support for Agriculture of Ukraine" (2004), which was used to study the financial mechanisms that support the development and stability of the agricultural sector. Additionally, the provisions of the Law of Ukraine No. 1264-XII "On Environmental Protection" (1991) were analysed in the context of the impact of agricultural production on the environment. The study also examined the regulations of the Law of Ukraine No. 2806-IV "On the Permit System in the Field of Economic Activity" (2005), which was used to evaluate regulatory procedures in the context of environmental compliance. By examining these laws, the study identified key provisions that influence the balance between economic and environmental aspects of food security.

During the study of Poland's experience in the legal regulation of relations related to food security and environmental protection, the following legislative acts were analysed: the Act of Poland No. 171 "On Food Safety and Nutrition" (2006), which is used to assess mechanisms for product quality control and the transparency of its labelling; the Act of Poland No. 92 "On Nature Conservation" (2004), whose provisions set environmental restrictions for the agricultural sector and mechanisms for ensuring compliance, particularly in the context of biodiversity conservation and sustainable land use; and the Act of Poland No. 199 "On Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection, and on Environmental Impact Assessments" (2008), which regulates, among other things, public participation in environmental oversight. The study of these laws allowed for the identification of the advantages of the Polish approach to the legal regulation of relations, particularly in reconciling the need to ensure food security with environmental protection requirements.

The research focused on the EU's legal framework for promoting sustainable development in the food sector. Particular attention was given to the Farm to Fork Strategy (2020), which aims to implement environmental standards in the food industry and ensure food safety. The European Green Deal (2019) was analysed to understand the EU member states' commitments to greening agriculture and the food system. The Common Agricultural Policy (2013) was examined in the context of support mechanisms for farmers, including subsidy distribution and environmental requirements that impact the sector's economic and environmental sustainability. The analysis of EU legislation was conducted within the context of adapting Ukrainian legislation to European legal standards in the field of food safety.

International organisations' materials were examined to explore global approaches to food security and assess their applicability to Ukraine. The UN Sustainable Development Goals (2015) were instrumental in justifying the need for sustainable food systems and production methods that preserve ecosystems and adapt to climate change. The Food and Agriculture Organization's activities were studied to determine its contributions to supporting the agricultural sector, particularly during crises like the one in Ukraine. The World Food Programme's activities were analysed to understand mechanisms for humanitarian aid and support for local markets. The International Organization for Migration was examined due to its initiatives in ecological farming and adapting the agricultural sector to contemporary challenges. The World Bank was of interest due to its implementation of innovative technologies and sustainable natural resource management, which are crucial for developing legal frameworks for agricultural policy. The Food Security Index (2024) was used for a comparative analysis of food security levels between Ukraine and Poland, identifying strengths and weaknesses of national

policies in this area and justifying the need to improve Ukrainian legislation.

Results

Food sovereignty allows a state to independently determine its policy regarding the production, supply, and consumption of food, taking into account economic, social, and environmental needs. This concept aims to balance economic stability, environmental safety, and the human right to access nutritious food. However, successful implementation of food sovereignty requires effective legal regulation that encompasses both economic aspects and environmental constraints, ensuring sustainable development.

The Constitution of Ukraine (1996) provides the legal foundation for guaranteeing citizens' rights to an adequate standard of living and a clean environment. Article 48 ensures the right of everyone to an adequate standard of living, including food, while Article 50 guarantees the right to an environment safe for life and health. These provisions guide government policy and emphasise the preservation of natural resources essential for food security. Nonetheless, the effectiveness of realising these constitutional rights hinges on the sophistication of existing legislation, which defines the mechanisms for their enforcement and monitoring.

Ukraine's food security is intrinsically linked to the principles enshrined in the Declaration on State Sovereignty of Ukraine (1990). Articles III and VI of the Declaration emphasise Ukraine's right to independently resolve economic matters and have exclusive ownership of its natural resources, aligning with the concept of economic sovereignty. This concept, in turn, underpins the notion of food sovereignty, granting a state the authority to formulate its own agricultural policy to provide its population with safe and quality food, while considering ecological and social demands. The practical realisation of food sovereignty necessitates the creation of mechanisms to support domestic

agricultural producers, promote environmentally friendly production, and conserve soil and water resources. The absence of integrating these principles into national policy hampers the agricultural sector's ability to adapt to global challenges such as climate change, environmental crises, and economic globalisation. Integrating the ideas of economic sovereignty, as outlined in the Declaration, would bolster Ukraine's independence, ensuring food security and sustainable development.

Among the most significant laws governing environmental matters is the Law of Ukraine No. 1264-XII "On Environmental Protection" (1991). This law establishes principles for the rational use of natural resources and mandates the implementation of environmentally safe technologies. Article 13 of the Law stipulates that economic entities must adhere to the principles of environmental safety. For agriculture, this implies adopting practices that conserve soil and water resources, such as reducing pesticide use, transitioning to organic farming, and implementing drip irrigation, which helps to minimise the negative environmental impacts of agricultural production (Ramón & Lull, 2019).

However, the practical implementation of these requirements faces numerous challenges. For instance, in Resolution of the Supreme Court of Ukraine in Case No. 912/823/18 (2020) it was established that a company had been discharging pollutants into the atmosphere without the necessary permits, resulting in significant environmental damage. This case highlights deficiencies in the system of monitoring and oversight for environmental law compliance. According to the Audit Chamber Report in 2023 (2024), the total amount of identified violations and shortcomings in public finance management amounted to nearly UAH 60.8 billion. Although this report encompasses various areas, a substantial portion of the violations relates to environmental control, indicating systemic issues in the financing

and organisation of environmental oversight. Allocating only 0.8% of the total state budget to environmental control is manifestly inadequate. For comparison, in EU countries, the share of expenditures on environmental protection averages 2-3% of the state budget (Analysis of certain..., 2021). Underfunding results in a shortage of modern monitoring equipment, an insufficient number of qualified inspectors, and limited capacity for conducting regular inspections. Consequently, the effectiveness of control is diminished, creating conditions for further violations of environmental legislation.

Financial support for agriculture is a cornerstone of a state's mechanism for ensuring food security. The Law of Ukraine No. 1877-IV (2004) establishes the framework for providing subsidies and compensations to producers. Article 7 of the Law stipulates that such support should facilitate the implementation of innovative technologies. The absence of environmental criteria for granting such aid diminishes its effectiveness in the context of sustainable development. For example, in areas where subsidies are distributed without considering water pollution or soil quality, significant resource depletion has been observed. Specifically, the 2023 report of the Audit Chamber of Ukraine indicated that in Vinnytsia and Dnipropetrovsk regions, the absence of environmental requirements during subsidy allocation has led to a substantial increase in water pollution due to excessive nitrogen fertiliser use, resulting in soil degradation and river pollution in the Southern Bug basin. A similar situation was recorded in the Odesa Region, where increased pesticide use without adequate controls has led to soil quality degradation, putting additional pressure on local ecosystems (Audit Chamber Report..., 2024). These examples underscore the importance of integrating environmental criteria into subsidy programs.

Food safety in Ukraine is governed by the Law of Ukraine No. 771/97-VR "On Basic Principles

and Requirements for Food Safety and Quality" (1997). Article 20 of this Law mandates that food business operators adhere to standards at all stages of production. While these standards focus on product quality and safety, environmental impacts of production are largely overlooked. For instance, Article 37, which regulates food traceability, could be utilised to monitor environmental standards, but the absence of clearly defined environmental indicators limits its potential. In contrast, Poland's legislation, specifically Act of Poland No. 171 "On Food Safety and Nutrition" (2006), explicitly outlines environmental criteria. For example, Article 18 obliges producers to implement waste management measures that minimise their volume and environmental impact. Article 22 sets out requirements for using biodegradable or recyclable packaging for food products, significantly reducing plastic waste. Furthermore, Article 28 mandates that producers comply with energy efficiency standards and the rational use of water resources during production processes. Product traceability, as outlined in Article 35, ensures environmental control at every stage of production, allowing for the timely detection of violations. Such an approach enables Poland to mitigate the environmental impact of food production and enhance the environmental responsibility of producers.

The implementation of food sovereignty is impossible without an effectively functioning permit system that regulates economic activities impacting the environment. The Law of Ukraine No. 2806-IV "On the Permit System in the Field of Economic Activity" (2005) establishes the legal framework for issuing permits to conduct activities related to natural resource use. For instance, Article 4 of this law stipulates that permits for specific types of economic activities are granted only upon compliance with environmental legislation. However, the absence of specific environmental criteria in the Law for assessing the environmental

impact of activities creates a loophole that allows economic entities to consider environmental risks only to a limited extent. This is particularly critical for the agricultural sector where pesticide use or land clearing significantly impacts natural resources. Moreover, research indicates that pesticide application can have longlasting negative effects on soil ecosystems and biodiversity.

Within the context of food sovereignty, particular attention should be paid to biodiversity conservation, which underpins sustainable agricultural production. The Law of Ukraine No. 591XIV (1999) regulates the use, protection, and reproduction of plant resources, an integral component of the natural environment. Article 10 of this law stipulates the requirement to consider ecological and economic interests when utilising plant resources, but it does not provide clear mechanisms for monitoring compliance with these provisions. In the agricultural sector, practices such as the overuse of pastures and deforestation of shelterbelts remain largely unregulated, leading to soil degradation and the loss of natural ecosystems. According to the State Environmental Inspectorate of Mykolaiv Region, the deforestation of shelterbelts in southern Ukraine results in a loss of soil fertility, erosion, and other serious consequences (On the situation..., 2021). This problem significantly hinders the achievement of sustainable development in the agricultural sector and undermines the environmental component of food security.

Balancing economic security with the right to a clean environment within the framework of food sovereignty requires a coordinated interaction between the economic and environmental sectors. Effective legal regulation can be a key tool for harmonising these aspects. Integrating environmental standards into agricultural subsidy mechanisms can not only stimulate the adoption of sustainable practices but also ensure the long-term stability of food systems. For example, introducing

financial incentives for producers who employ technologies to reduce carbon emissions or minimise the use of chemical fertilisers can be a powerful driver for transitioning to environmentally responsible farming (Giordano *et al.*, 2020). This would create opportunities for balanced development, preserving natural resources and improving the environmental condition of territories.

It is essential to enhance the mechanisms of state support for the agricultural sector, as outlined in the Law of Ukraine No. 1877-IV "On State Support for Agriculture of Ukraine" (2004). Article 13 of this law defines financial support in the form of subsidies, interest rate compensation on loans, and reimbursement of leasing costs for equipment. These instruments significantly influence the economic activity of farmers and the development of the agricultural sector. A significant obstacle is the absence of environmental criteria in these programs, which creates gaps in ensuring balanced development. For instance, producers can receive state support even if their activities cause water pollution, soil degradation, or other negative impacts on the environment. The Programme of the Ministry of Finance of Ukraine "Affordable loans 5-7-9%" (2020) provides preferential loans to farmers without mandatory environmental requirements, which can lead to the financing of environmentally harmful practices. Similarly, the Program for Partial Compensation of the Cost of Domestic Agricultural Machinery and Equipment (2017) lacks environmental criteria, allowing for the support of technologies that may negatively impact ecosystems.

Integrating mandatory environmental requirements into subsidy mechanisms, such as incentivising organic farming, reducing agrochemical inputs, or adopting sustainable technologies, could simultaneously contribute to environmental protection and enhance economic stability in the agricultural sector. Germany's Eco-Schemes under the Common Agricultural Policy (2023)

provides subsidies to farmers for implementing sustainable practices like crop rotation, organic farming, and reducing pesticide and fertiliser use. These measures contribute to soil conservation, biodiversity preservation, and reducing water pollution. Another example is the Federal Program for Organic Farming and Other Forms of Sustainable Agriculture (2002), which provides financial support to farmers transitioning to environmentally friendly production methods, subject to compliance with EU organic standards.

The Law of Ukraine No. 1264-XII (1991) provides the foundation for environmental regulation aimed at preserving natural resources. Article 31 of the Law mandates environmental impact assessments for all economic activities that may have significant impacts on ecosystems. While this procedure involves analysing potential environmental consequences, its application in the agricultural sector is insufficient in practice. For instance, a 2021 study revealed a 2.3-fold increase in mineral fertiliser use in Ukraine over the past decade, and a 50% increase in pesticide-treated areas (Berezhniuk, 2021). This has led to significant groundwater contamination by nitrates and other harmful substances, as confirmed by analyses of well water in various regions. Notably, two-thirds of the wells studied exceeded permissible levels of nitrates, nitrites, and ammonium, posing a serious threat to public health. Furthermore, excessive use of agrochemicals contributes to the eutrophication of water bodies, resulting in algal blooms, decreased oxygen levels, and fish kills (Svitalinsky, 2024). This phenomenon is observed in many Ukrainian rivers and lakes, negatively impacting ecosystems and biodiversity. Expanding the scope of environmental impact assessments for agricultural enterprises, including the incorporation of sustainable land use criteria, could provide better control over environmental risks.

Overall, expanding environmental requirements in the food sector is a necessary step

towards achieving true food sovereignty, which combines economic stability, environmental protection, and respect for citizens' rights. Only through the integration of both environmental and economic aspects into the legal framework can sustainable development and food independence for Ukraine be ensured.

In 2020s, the issue of food sovereignty has gained particular relevance in Poland, as evidenced by protests from Polish farmers against the import of agricultural products from Ukraine. Farmers claim that Ukrainian grain, intended for transit, is remaining in Poland, lowering prices and making it difficult to sell their own products (Lepage, 2024). A key piece of legislation ensuring Poland's food sovereignty is the Act of Poland No. 171 "On Food Safety and Nutrition" (2006). Article 48 of this act mandates the labelling of food products in Polish and requires comprehensive information about their origin, composition, and safety for consumers. This approach allows for the control of product quality on the domestic market and ensures transparency for consumers. In Ukraine, similar requirements are enshrined in the Law of Ukraine No. 771/97-VR "On Basic Principles and Requirements for Food Safety and Quality" (1997), however, in practice, control over labelling is often insufficient due to a lack of effective verification mechanisms. For instance, according to the State Service of Ukraine on Food Safety and Consumer Protection (2024), numerous violations of food labelling requirements have been detected, indicating the inadequacy of the control system and the need for its improvement. Moreover, the simplification of labelling requirements during martial law, introduced by Resolution of the Cabinet of Ministers of Ukraine No. 186 (2022), may lead to a decrease in consumer awareness about the actual composition and properties of food products. These factors highlight the need to improve control mechanisms and ensure proper labelling of food products in Ukraine.

Another crucial element of the Polish system is the Act of Poland No. 92 “On Nature Conservation” (2004), particularly Article 82, which obliges economic operators to adhere to environmental standards in agriculture to preserve biodiversity and prevent the degradation of natural resources. The law specifically regulates the implementation of sustainable practices such as crop rotation, limiting the use of fertilisers and pesticides, and mandating the preservation of shelterbelts to combat soil erosion. The advantage of this approach lies in a clear control system, ensured by environmental inspections and mandatory reporting by farmers. According to the Central Statistical Office of Poland, in 2023, the area of ecologically certified land in Poland reached 4% of the total agricultural area, confirming the success of implementing environmental requirements and state support for sustainable agriculture (Statistical Yearbook of..., 2023). This approach effectively combines food security with environmental protection, ensuring the country’s long-term food sovereignty.

The Act of Poland No. 199 “On Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection, and on Environmental Impact Assessments” (2008) mandates, in Article 21, the creation of publicly accessible registers of environmental information. This ensures that the public can access data on the state of the environment and environmental protection measures, increasing transparency and facilitating public participation in decision-making processes. For instance, in 2022, Poland held public consultations on updating the Action Programme aimed at reducing nitrate pollution of waters from agricultural sources, demonstrating the involvement of the public in environmental monitoring in the agricultural sector (Public Consultations as..., 2022).

According to the Food Security Index (2024) by Economist Impact, Poland ranks 21st out of 113 countries, while Ukraine is in 58th place. This

index considers key indicators of food security such as affordability, availability, quality, safety, and sustainability of food systems. Poland’s high ranking is indicative of the effectiveness of its national legislation in ensuring food security, which is closely linked to the preservation of natural resources and the rational use of land. Polish legislation, notably the Act of Poland No. 92 “On Nature Conservation” (2004) and the Act of Poland No. 199 “On Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection, and on Environmental Impact Assessments” (2008), not only provides specific environmental standards for the agricultural sector but also establishes effective mechanisms for public participation in environmental monitoring. Transparency and public engagement help minimise environmental risks associated with agricultural activities, which is a crucial factor for achieving sustainable food systems.

Conversely, Ukraine’s lower ranking in the Food Security Index highlights existing challenges in its legislative and regulatory frameworks, particularly in the context of environmental standards and controls in agriculture. While Ukrainian laws, such as the Law of Ukraine “On Environmental Protection” (1991), establish general environmental protection requirements, their practical application is often insufficient due to a lack of clear monitoring and control mechanisms. Unlike Poland, where the state actively implements a sustainable agricultural development policy involving environmental inspections and public participation, these aspects require improvement in Ukraine. Enhancing transparency, specifying environmental standards, and strengthening enforcement are crucial steps to improve the effectiveness of food policy and bring Ukraine closer to the food safety standards successfully implemented in Poland.

The EU is actively implementing a multi-faceted regulatory approach to food security,

encompassing economic, environmental, and social aspects. This policy aims to create a sustainable agricultural sector that can address contemporary challenges, including climate change and the preservation of natural resources (Gerstenberg, 2020). A key component of this policy is the establishment of clear environmental standards and mechanisms for their enforcement, ensuring the responsible use of land, water, and chemicals in agriculture. While Ukrainian legislation contains some provisions aimed at rational resource use, it still lacks such a detailed and integrated regulatory system.

The framework principles for agricultural regulation in the EU are defined in the Common Agricultural Policy (2013), which establishes mechanisms for “environmental conditionality”. According to Article 4 of Regulation of the European Parliament and of the Council No. 2021/2115 (2021), farmers can receive financial support only if they comply with environmental standards. These standards include preserving landscape features, adhering to crop rotation, and reducing water and fertiliser use. For instance, farmers are required to set aside a minimum percentage of their land for environmental protection, contributing to biodiversity conservation. The absence of such environmental criteria in Law of Ukraine No. 1877-IV “On State Support for Agriculture of Ukraine” (2004), which provides financial assistance to farmers, has contributed to the depletion of natural resources and environmental pollution. This highlights the importance of integrating environmental standards into Ukraine’s agricultural policy, aligning it more closely with the European approach.

The EU’s climate goals, outlined in the European Green Deal (2019), focus on reducing the negative environmental impact of the agricultural sector. Specifically, clause 2.2 aims to reduce pesticide use by 50% and fertiliser use by 20% by 2030. Particular attention is paid to the

development of precision agriculture, which, through modern technologies such as GPS monitoring and automated management systems, allows for more efficient resource use. Ukrainian legislation, notably the Law of Ukraine No. 1264-XII “On Environmental Protection” (1991), contains only general requirements for the rational use of natural resources, without specifying targets or requirements for reducing the use of chemicals in agriculture. In this context, adapting the provisions of the European Green Deal (2019) could significantly enhance the environmental component of Ukraine’s agricultural policy.

The Farm to Fork Strategy (2020), aimed at creating a fair and environmentally sustainable food system, is a crucial component of the EU’s agricultural policy. One of its objectives, outlined in clause 3.1, is to reduce food waste by 50% by 2030. This commitment necessitates the implementation of effective food traceability systems that ensure quality control at all stages of the supply chain. Ukrainian legislation also includes elements of traceability in Article 37 of the Law of Ukraine No. 771/97-VR “On Basic Principles and Requirements for Food Safety and Quality” (1997). However, the implementation of such a system faces numerous challenges, including insufficient technical equipment and funding. Furthermore, the area dedicated to organic farming, a priority for the EU, remains small in Ukraine due to the lack of effective support programs for this sector.

Pesticide regulation in the EU is a cornerstone of agricultural environmental safety. The directive of the European Parliament and of the Council No. 2009/128/EC “Establishing a Framework for Community Action to Achieve the Sustainable Use of Pesticides” (2009), which establishes a framework for the sustainable use of pesticides, sets clear guidelines. These include prohibitions on pesticide use near residential areas or protected sites (Article 12) and mandatory training for all pesticide handlers (Article 5). Such requirements contribute

to reducing soil and water pollution and protecting public health. In contrast, the Law of Ukraine No. 180-XIV “On Plant Protection” (1998) does

not yet include similar provisions, leading to regulatory gaps and increasing the risks of uncontrolled chemical use (Table 1).

Table 1. Comparison of EU and Ukrainian legislation in the sector of food security and environmental sustainability

Issue	EU legislation provisions	Ukrainian legislation provisions
Financial support for the agricultural sector	Regulation of the European Parliament and of the Council No. 2021/2115: Article 31 provides funding for “ecoschemes” that promote environmentally responsible practices, including the reduction of chemical use	Law of Ukraine No. 1877-IV “On State Support for Agriculture of Ukraine”: Article 13 regulates the provision of financial assistance but does not consider environmental criteria as mandatory
Reduction of pesticide use	Directive of the European Parliament and of the Council No. 2009/128/EC: Articles 5-14 require training, certification for pesticide users, and mandatory monitoring of their use	Law of Ukraine No. 180-XIV “On Plant Protection”: Article 18 includes provisions on pesticide use monitoring but lacks clear mechanisms for user training and certification
Organic farming	Regulation of the European Parliament and of the Council No. 2018/848 “On Organic Production and Labelling of Organic Products and Repealing Council Regulation (EC) No 834/2007”: Articles 3-10 set requirements for organic farming and establish financial incentives for its development	Law of Ukraine No. 771/97-V “On Basic Principles and Requirements for Food Safety and Quality”: Articles 8-12 regulate organic production, but financial support remains insufficient
Emissions control	Regulation of the European Parliament and of the Council No. 2018/841 “On the Inclusion of Greenhouse Gas Emissions and Removals from Land Use, Land Use Change and Forestry in the 2030 Climate and Energy Framework, and Amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU” (2018): Articles 4-6 establish mandatory reporting of emissions in land use and agriculture	Law of Ukraine No. 1264-XII “On Environmental Protection”: Article 32 requires the reporting of greenhouse gas emissions, but mandatory monitoring at the farm level is absent
Food loss	Farm to Fork Strategy; Regulation of the European Parliament and of the Council No. 2021/2115: Article 5 aims to reduce food losses in supply chains by 50% by 2030	Law of Ukraine No. 771/97-VR “On Basic Principles and Requirements for Food Safety and Quality”: Article 19 regulates product circulation but lacks specific provisions on reducing losses
Biodiversity conservation	Eco-Schemes under the Common Agricultural Policy: Articles 13-14 aim to integrate conservation measures in agriculture to preserve biodiversity	Law of Ukraine No. 1264-XII “On Environmental Protection”: Article 37 provides for biodiversity conservation measures but does not integrate them into agricultural policy
Pesticide user training	Directive of the European Parliament and of the Council No. 2009/128/EC: Articles 5-6 establish mandatory certification for those working with pesticides to reduce harmful impacts	Law of Ukraine No. 180-XIV “On Plant Protection”: Article 24 provides general training requirements, but certification and regular professional development are not mandatory

Source: developed by the author

A comparative analysis of legislation reveals that EU regulations significantly better incorporate environmental requirements in the realm of

food safety. In the EU, financial support for farmers is contingent upon adherence to environmental standards such as organic farming or reduced

emissions (Lähteenmäki-Uutela *et al.*, 2021). In contrast, Ukraine does not stipulate environmental criteria for receiving state aid, which can lead to funds being used without considering the environmental consequences. Regarding pesticide use, the EU has strict regulations prohibiting their application near residential areas or protected zones, whereas Ukraine lacks such specific norms, increasing the risk of environmental pollution. Moreover, the EU is actively working to reduce food waste in supply chains and promote organic farming, while these areas remain underdeveloped in Ukrainian legislation. These disparities underscore the need for Ukraine to align its legislation with EU standards to ensure the sustainable development of its agricultural sector.

In conclusion, European legislation demonstrates a systematic approach to integrating environmental standards into food policy, balancing environmental protection with economic support for agriculture. In contrast, Ukrainian regulations have been slower to address the environmental aspects of agriculture, hindering sustainable development and integration into European standards. To align with European norms, Ukraine must strengthen environmental requirements for farm subsidies, introduce mandatory training programs for pesticide users, and develop an effective product traceability system. These steps would facilitate legislative harmonisation and ensure the long-term sustainability of the agricultural sector.

International food safety legislation provides a framework for ensuring access to quality food, preserving natural resources, and mitigating climate change, all of which impact the agricultural sector. Fundamental principles in this area are established globally through key documents that outline commitments for nations. A notable example is the Rome Declaration on World Food Security (1996). Clause 1.3 of this declaration stipulates that countries are committed to

preserving natural resources by adopting sustainable land and water use practices and promoting biodiversity to ensure food security. Moreover, clause 2.5 emphasises the need to consider climate change when developing agricultural policies, including adapting the agricultural sector to changes and reducing its environmental impact.

These provisions underscore the importance of implementing measures to reduce agrochemical loads, introduce sustainable farming technologies, and protect water resources. In Ukraine, such issues are partially addressed by the Law of Ukraine No. 1877-IV "On State Support for Agriculture of Ukraine" (2004), which provides mechanisms for supporting farmers. However, the integration of environmental criteria and climate change mitigation remains insufficiently regulated. Implementing the principles outlined in clauses 1.3 and 2.5 of the declaration could contribute to the creation of effective government programs to harmonise agricultural policy with international sustainable development standards.

The UN Sustainable Development Goals (2015), particularly Goal 2, aim to ensure access to food, food security, improved nutrition, and sustainable agriculture. A key objective in this context is to develop sustainable food systems and implement production methods that are resilient to climate change while preserving ecosystems (Goal 2.4). In Ukraine, the legal framework partially addresses these aspects, notably through the Law of Ukraine No. 1264-XII "On Environmental Protection" (1991), which outlines general principles for the rational use of natural resources. However, sustainable agricultural practices remain inadequately enshrined in specialised legislation. For instance, the Law of Ukraine No. 1877-IV (2004) provides mechanisms for financial assistance, such as subsidies and compensations, but lacks provisions that would incentivise the adoption of environmentally sustainable production methods, like organic

farming, reduced agrochemical use, or efficient water management. The law contains no specific section or article dedicated to promoting sustainable practices, falling short of the principles outlined in Goal 2.4 of the UN Sustainable Development Goals (2015). Similarly, the Law of Ukraine No. 858-IV “On Land Management” (2003) does not adequately facilitate the integration of sustainable methods into agricultural activities. While it establishes the foundations for land use planning, including requirements for land management documentation, it lacks clear environmental criteria to ensure sustainable land use. For example, Article 22 of this law mandates the development of land management projects to justify crop rotations but does not require consideration of soil degradation prevention or biodiversity conservation. Implementing the provisions of the Sustainable Development Goals would contribute to modernising the agricultural sector and enhancing its resilience to climate change.

International organisations have played a pivotal role in supporting Ukraine’s food sovereignty, integrating economic security with environmental standards. The Food and Agriculture Organization implemented numerous projects in 2023 aimed at rebuilding Ukraine’s agricultural sector. A significant achievement was the provision of emergency support to small-scale farmers, including the delivery of seeds, equipment, and storage facilities. A particularly noteworthy initiative involved clearing agricultural lands of explosives, enabling the cultivation of over 100,000 hectares (Mostenska *et al.*, 2022). This contributed to the stability of local food systems, fostering economic security and preserving ecosystems.

Another crucial initiative has been the work of the World Food Programme, which actively supports vulnerable populations. In 2023, the World Food Programme provided humanitarian assistance to over 4 million people in Ukraine. The organisation not only supplied food to

vulnerable groups but also implemented direct cash assistance programs. This approach empowered families to procure their own food while supporting local markets. Additionally, the World Food Programme actively purchased products from local producers for humanitarian purposes, stimulating the development of local food systems and reducing reliance on imports.

The International Organization for Migration’s grant programs for farmers and communities affected by conflict have made significant contributions to the recovery of agricultural activities. In 2022-2023, the International Organization for Migration implemented an initiative providing financial assistance to small-scale farmers to purchase organic seeds and adopt environmentally friendly farming practices. This enhanced productivity, protected natural resources, and contributed to economic stability, safeguarding citizens’ right to a healthy environment. The World Bank has played a pivotal role in modernising Ukraine’s agricultural sector by supporting the adoption of new technologies and efficient resource utilisation. As part of the “Supporting Transparent Land Administration in Ukraine” project, implemented in 2022, an efficient water management system for irrigation was established. This initiative reduced water consumption by 30%, increasing agricultural productivity and minimising environmental impact. Furthermore, the World Bank funded the development of logistical solutions to reduce food loss in supply chains, which is crucial for domestic market stability and strengthening the export potential of the agricultural sector (Peters, 2020).

In conclusion, international organisations are making significant contributions to strengthening Ukraine’s food sovereignty by promoting a balance between economic stability and environmental sustainability. Their activities encompass a wide range of initiatives, including supporting farmers, implementing sustainable farming practices, ensuring the preservation of natural

resources, and developing infrastructure. Such efforts not only help address current challenges but also lay the foundation for the long-term development of the agricultural sector (Table 2).

These initiatives contribute to aligning national strategies with international standards, integrating economic and environmental interests into government policy.

Table 2. Role of international organisations in shaping food security legal frameworks

Organisation	Key functions in the food security sector	Examples of programmes and initiatives
Food and Agriculture Organization	Development of global sustainable development standards, risk assessment of hunger, technical support in implementing sustainable agriculture programmes	"Global Initiative for Soil Conservation", World Food Security Reports
World Health Organization	Food safety control, development of food quality recommendations, monitoring of foodborne infections and chemical contamination	Codex Alimentarius standards, publications on permissible levels of chemicals in food
World Bank	Financing agricultural modernisation, supporting investment in sustainable agricultural development, and reducing losses in supply chains	Investment programmes for irrigation systems and support for organic farming in developing countries
International Monetary Fund	Supporting economic stability through financing reforms in food policy, promoting infrastructure development for food security	Loans for agricultural reforms, projects supporting infrastructure development for agricultural exports
United Nations	Formulation of global sustainable development goals, coordinating international efforts to address hunger, combating climate change, and their impact on food security	Coordination of Sustainable Development Goals for 2030, World Food Day, climate change adaptation initiatives

Source: developed by the author

Technology is a pivotal tool in ensuring food security, as it contributes to increased production efficiency, resource conservation, and reduced environmental impact. The implementation of such technologies necessitates comprehensive legal regulation, including the development of incentive mechanisms, the establishment of standards and regulations, and the enforcement of compliance (Cicchello, 2022). The digitalisation of the agricultural sector encompasses precision farming systems, which utilise drones, GPS navigation, and sensor data to optimise the use of fertilisers and pesticides, thereby reducing chemical loads on soils. To facilitate this process, it is essential to establish legal mechanisms supporting digital technologies in agriculture. For instance,

Article 13 of the Law of Ukraine No. 1877-IV (2004) could be amended to include provisions for compensating the costs of implementing digital solutions that reduce resource consumption and promote environmental protection. This would provide financial incentives for farmers investing in such technologies.

Another critical aspect is the implementation of electronic product traceability systems. These systems provide comprehensive information about a product's journey from producer to consumer, enabling effective quality and safety control. This is partially regulated by the Law of Ukraine "On Basic Principles and Requirements for Food Safety and Quality" (1997), particularly Article 20 on product traceability. However, the

implementation of such systems is hindered by the lack of subordinate legislation establishing technical standards for electronic platforms, procedures for their use, and liabilities for non-compliance. It is also essential to ensure accessibility to such platforms for small and medium-sized enterprises through government support mechanisms.

A separate focus area is the adoption of technologies aimed at conserving water resources, such as drip irrigation or automated water supply systems. Given the changing climate and its impact on agricultural water availability, the use of such technologies is particularly relevant (Tan *et al.*, 2023). The Law of Ukraine “On Environmental Protection” (1991) could be supplemented with provisions mandating the use of water-saving technologies in regions with high water scarcity. Additionally, it is crucial to establish government programs that compensate farmers for the costs of installing such systems or introduce tax incentives for those adopting these solutions. Equally important is the application of technologies for environmental monitoring. For instance, the deployment of drones to monitor soil conditions, water pollution levels, and agricultural land health can form the basis for effective environmental control. Therefore, the Law of Ukraine No. 1264-XII (1991) should be supplemented with provisions regulating the use of unmanned aerial vehicles for environmental protection purposes, and their integration into the national monitoring system.

In conclusion, ensuring food sovereignty is impossible without integrating economic incentives and environmental standards into the legal framework. The effective use of tools such as subsidies, product traceability systems, and environmental impact assessments must be combined with adaptation to international obligations, particularly in the area of climate change mitigation. Establishing clear environmental criteria for financial support, improving monitoring systems, and adopting modern technologies in

agriculture are key steps towards achieving a balance between food security and the preservation of natural resources. This will contribute not only to the stability of the agricultural sector but also to fulfilling Ukraine’s environmental obligations at the international level.

Discussion

This research has highlighted key aspects of the legal regulation of food sovereignty, focusing on the interplay of economic incentives, environmental standards, and international initiatives. A comparative analysis of Ukrainian legislation against EU norms has revealed significant shortcomings, particularly the absence of environmental criteria in state support mechanisms for the agricultural sector. The substantial role of international organisations has underscored the importance of implementing sustainable practices and ensuring food security. Harmonising Ukrainian legislation with international standards has been identified as a critical step in achieving a balance between economic security, environmental protection, and citizens’ rights. The findings of this research provide a foundation for further exploration of their significance in the context of existing scholarly research.

The research has confirmed the need to integrate environmental standards into state support mechanisms for the agricultural sector, which are currently underdeveloped. It has been established that financial support for farmers does not take into account environmental requirements, posing long-term threats to the environment and infringing on citizens’ rights to a clean environment. In this context, the assertions of L. Filho *et al.* (2023), and T. Hassen and H. Bilali (2022) regarding the importance of “green” subsidies are fully justified, as the research findings confirm their effectiveness in preserving natural resources. In contrast to the conclusions of L. Filho *et al.* (2023), and T. Hassen and H. Bilali (2022), the Ukrainian context presents a different picture,

where the absence of a clear regulatory framework linking subsidies to environmental compliance is a key problem. This, in turn, impacts economic security in the agricultural sector.

Inadequate regulation of agrochemical use has been identified as a significant threat to food, economic, and environmental security. The study highlighted that Ukrainian legislation is general in nature and does not provide detailed regulations for pesticide use in agriculture. In contrast, the EU's strict regulations on the use of chemicals near water bodies have led to a significant reduction in pollution levels, closely linked to the protection of the right to a clean environment. Research by D. Sampson *et al.* (2021) and M. Canfield (2020) has analysed EU directives that have positively impacted water quality. The EU experience demonstrates that implementing similar rules in Ukraine could be an effective tool for reducing pollution risks and contributing to the stability of agricultural production.

An analysis of Ukrainian legislation has revealed a significant gap between state support programs for the agricultural sector and the requirements for preserving natural resources. In particular, support programs do not include mandatory environmental criteria for granting subsidies, posing risks to the environment. Studies by A. Mayastuti *et al.* (2022) and K. Tan *et al.* (2023) show that in Northern European countries, the introduction of environmental requirements for financial support to farmers has significantly reduced soil and water pollution. In comparison, the absence of such conditions in Ukraine indicates the need to revise legislation to ensure a balance between economic security and citizens' right to a clean environment.

Deficiencies in the agrochemical monitoring system also pose a significant problem. An analysis of Ukrainian legislation has revealed a lack of effective mechanisms for controlling the application of chemical substances in areas adjacent to

protected zones. Research by A. Torres (2020) and A. Baiano (2020) shows that in the United Kingdom, the implementation of clear rules for protecting environmentally sensitive areas has significantly reduced the negative impact of the agricultural sector on the environment. For Ukraine, such an approach could serve as a basis for creating legal mechanisms that simultaneously consider the economic needs of farmers and the environmental priorities of the state.

The analysis has shown that Ukrainian legislation does not adequately utilise the potential of organic farming as a tool for food security and environmental protection. Research by D. Perkumiene *et al.* (2020) and N. Okano (2021) demonstrates that in EU countries, the transition to organic production has improved product quality and reduced environmental impact. For Ukraine, this experience can serve as an example of effectively combining economic and environmental goals. However, the results indicate that the development of the organic sector in Ukraine is hindered by insufficient government incentives and a lack of clear legal mechanisms to support this direction. For instance, legislative norms regulating state subsidies do not contain specific provisions to promote organic farming. This highlights the need to update the regulatory framework to integrate the successful experience of European countries and ensure a balance between economic security and environmental priorities.

The lack of adequate infrastructure for processing and storing food products is a significant barrier to food security and economic stability. Substantial crop losses due to insufficient transportation and storage conditions indicate the low efficiency of supply chains. Q. Zhang *et al.* (2019) and G. Riches (2019) emphasise that investments in infrastructure are critical to minimising such losses. The analysis confirms this problem and indicates the need to accompany investments in this area with the creation of a regulatory framework

that would ensure quality control for the storage and transportation of products. This would contribute not only to strengthening economic security but also to the long-term preservation of natural resources.

An analysis of product traceability in Ukraine has revealed insufficient legal requirements that only cover specific stages of the production cycle. In EU countries, traceability systems provide control at all stages of production and supply, significantly increasing the effectiveness of quality control. In the study of L. Ayalon *et al.* (2021), it is noted that such systems are an effective tool in ensuring food safety. However, the research results show that in Ukraine, the absence of an integrated traceability system creates risks for consumers and hinders access to international markets. This underscores the need to implement a unified electronic traceability platform that will contribute to both economic security and consumer protection (Busol & Romaniuk, 2024).

International organisations such as the Food and Agriculture Organization and the World Food Programme provide significant support in adapting Ukraine's agricultural sector to contemporary challenges, including climate change and ensuring sustainable development. The Food and Agriculture Organization's recommendations regarding the rational use of natural resources, the introduction of innovative agricultural technologies, and the reduction of losses in food supply chains are key to developing long-term environmental and economic strategies. S. Liebenberg (2020) and V. Zikankuba *et al.* (2019) emphasise that such initiatives create a foundation for transforming the agricultural sector in the face of global challenges, ensuring economic stability and environmental responsibility. However, in the Ukrainian context, these programs face the challenge of insufficient integration into the national legal system, which limits their practical implementation. For instance, the absence of

by-laws regulating the implementation of Food and Agriculture Organization recommendations complicates their adaptation to Ukrainian realities. Deeper integration of international organisation initiatives would contribute not only to protecting the right to a clean environment but also to ensuring the long-term economic stability of the agricultural sector.

The insufficient adaptation of legislation to climate challenges is another significant aspect requiring improvement. The European approach, particularly the Farm to Fork Strategy (2020), as noted by A. Lähteenmäki-Uutela *et al.* (2021) and O. Gerstenberg (2020), has demonstrated successful results in reducing greenhouse gas emissions, efficient resource use, and biodiversity conservation. This strategy encompasses measures from modernising agricultural equipment to developing organic farming, ensuring environmental sustainability without compromising economic growth. An analysis of Ukrainian legislation shows that these aspects are only partially considered, and key regulatory documents do not provide a comprehensive approach to the necessary changes. The reasons for such discrepancies may lie in the lack of strategic planning, insufficient resources for adaptation, and inadequate involvement of international experience in the development of regulatory acts. These shortcomings limit the opportunities for integrating sustainable practices into agriculture, which, in turn, jeopardises the right to a clean environment and economic security. Thus, the research has indicated the importance of harmonising Ukrainian legislation with international standards, integrating environmental standards, and developing mechanisms for monitoring compliance. The conducted analysis demonstrates that the balanced development of the agricultural sector requires a comprehensive approach that combines economic security with respect for the right to a clean environment.

Conclusions

An analysis of Ukrainian legislation has revealed that ensuring food security requires a greater focus on integrating environmental standards. Existing mechanisms of state support for the agricultural sector are primarily focused on economic aspects, while the environmental component is largely ignored. This poses risks to the environment, including soil degradation and water pollution due to the use of inappropriate practices. Integrating environmental criteria into subsidy programs could promote the adoption of sustainable farming methods, such as organic agriculture, rational resource management, and reduced use of agrochemicals. Implementing such an approach would help preserve natural resources and strengthen the position of Ukrainian products on the global market.

The underdeveloped food traceability system is a significant challenge for ensuring food safety and compliance with international standards. Current legislation covers only part of the supply chain, reducing the transparency of production processes and creating risks for consumers. The creation of an integrated traceability system that would cover all stages – from production to retail – could significantly improve quality control, reduce losses, and promote exports. The development of modern infrastructure for the storage and transportation of food products would help to significantly reduce product losses, which would have a positive impact on economic stability and improve public access to food.

The use of agrochemicals requires significant changes due to the lack of clear regulations regarding the application of pesticides in protected areas and near residential zones, creating significant environmental and social threats. The EU experience, particularly the strict requirements for zoning and controlling the use of agrochemicals, demonstrates the effectiveness of reducing negative environmental impacts and promoting

the rational use of resources. An analysis of EU strategies confirms that environmental requirements can combine the preservation of natural resources with increasing the economic efficiency of the agricultural sector. For Ukraine, it is critical to adapt these approaches to national realities to create a legal system that balances economic security with the right to a clean environment.

An analysis of Poland's approach to ensuring food security and environmental sustainability has demonstrated the effectiveness of an integrated model that combines clear regulation of the agricultural sector with specific mechanisms for environmental protection and public involvement in monitoring environmental risks. The Polish experience confirms that transparency of processes, active public participation, and specific requirements for sustainable production methods are key factors in achieving a balance between economic development and the preservation of natural resources. In comparison to Ukraine, where the legislative framework remains general and insufficiently specific, the Polish approach demonstrates higher effectiveness in the practical implementation of environmental and food standards. The research results indicate the need to improve the Ukrainian legal system by introducing effective control mechanisms and integrating environmental criteria into food security policy to achieve sustainable development and food sovereignty.

International organisations, notably the Food and Agriculture Organization, play a pivotal role in aligning Ukrainian legislation with international standards. Their recommendations regarding sustainable agriculture, environmentally responsible practices, and the rational management of natural resources lay the foundation for building an effective national food security system. Expert support in developing strategies that combine economic stability with environmental sustainability is a crucial element of this cooperation. Such

interaction not only facilitates the adaptation of Ukrainian legislation to global challenges but also integrates the country into global food systems, enhancing its competitiveness and resilience to contemporary threats.

In summary, it should be noted that the legal regulation of food security in Ukraine requires deep reform, taking into account international experience, environmental challenges, and national specificities. A limitation of this study was the insufficient consideration of regional aspects, which significantly influenced the implementation of the

proposed changes. Further research should focus on adapting legal mechanisms to regional specificities and natural and economic conditions, which would allow for the creation of a more effective and resilient food security system.

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Conflict of Interest

The author of this study declares no conflict of interest.

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Продовольчий суверенітет: між економічною безпекою та правом на чисте довкілля

Євген Новіков

Кандидат юридичних наук, докторант
Національний юридичний університет імені Ярослава Мудрого
61024, вул. Григорія Сковороди, 77, м. Харків, Україна
<https://orcid.org/0000-0002-6085-8258>

Анотація

Метою дослідження була реалізація комплексного аналізу правових механізмів інтеграції екологічних стандартів у забезпечення економічної стабільності та продовольчої безпеки. У ході роботи було проведено детальний аналіз нормативно-правових актів ЄС, зокрема країни-члена ЄС Польщі, та України, зокрема включаючи закони, що регулюють субсидування сільського господарства, екологічні стандарти та безпечність харчових продуктів. Результати показали, що чинне українське законодавство не забезпечує належної інтеграції екологічних підходів у механізми сприяння розвитку сільськогосподарської галузі. Зокрема, відсутність обов'язкових екологічних критеріїв при наданні субсидій створює умови для використання застарілих та екологічно небезпечних методів господарювання. Недостатнє регулювання у сфері застосування агрохімії спричиняє значні екологічні ризики, включаючи деградацію ґрунтів та забруднення водних ресурсів, що порушує право на чисте довкілля. Аналіз системи простежуваності продукції виявив її фрагментарність, що підвищує ризики втрати продукції на різних етапах постачання. Дослідження показало, що значна частина втрат агропродукції зумовлена недостатньою інфраструктурою для зберігання та транспортування, що посилює продовольчу нестабільність. Виділено важливість ролі міжнародних організацій, таких як Food and Agriculture Organization, які надають рекомендації для зменшення цих прогалин через впровадження інноваційних підходів. Ідентифіковано необхідність інтеграції екологічних критеріїв у механізми державного субсидіювання, узгодження національного законодавства з вимогами міжнародних норм й потребу вдосконалення систем простежуваності та інфраструктури для зберігання продукції, що значно посилить продовольчу безпеку. Отримані результати окреслили напрями реформ, які можуть забезпечити збалансований розвиток аграрного сектора, підвищити продовольчу стабільність та сприяти збереженню природних ресурсів у сучасних глобальних умовах

Ключові слова: продовольча безпека; екологічна безпека; сталий розвиток; правове регулювання; Україна; Польща; ЄС



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Environmental safety and its legal support in Ukraine

Serhii Lisovskyi*

Postgraduate Student

Private institution Research Institute of Public Law

03035, 2A G. Kirpa Str., Kyiv, Ukraine

<https://orcid.org/0009-0002-2287-0587>

Liudmyla Golovko

PhD in Law, Associate Professor

National University of Life and Environmental Sciences of Ukraine

03041, 15 Heroiv Oborony Str., Kyiv, Ukraine

<https://orcid.org/0000-0002-3742-2827>

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Abstract

The purpose of this study was to analyse Ukrainian legislation in the field of environmental protection and to identify the most effective legal acts related to ensuring this protection. Specifically, considering the analysis of the state of Ukraine's environment since the beginning of the full-scale invasion of Ukraine by the Russian armed forces. For an effective study of the topic, it was necessary to employ the historical and terminological methods. The study covered the essence of environmental security, its concept, content, and features, as well as the role of environmental security in the legal support of environmental protection in Ukraine. By defining the concept of environmental safety, the study identified the factors which influence its provision (specifically, environmental disasters caused by anthropogenic factors), and proved the significance and necessity of establishing effective legal regulation of this issue. The study analysed the legislation in the field

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*Corresponding author

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of the natural environment and its security, particularly, the most significant legal documents. The impact of military operations (including the effects of military equipment, weapons, and chemicals they release) on the legal regulation of environmental protection was also determined. The study provided a legal definition of the concept of environmental safety and its features and demonstrated the factors that affect the safety of the natural environment. Specifically, the study analysed legal regulation in the field of environmental safety. The analysis of key legal documents in this area helped to identify a list of tasks that will help to improve the environmental situation in Ukraine. Thus, this study showed the state of legal support for environmental safety in Ukraine as of 2024 and will help in further reforming environmental policy

Keywords: environment; legislation; regulation; military action; full-scale invasion

Introduction

The issue of environmental safety in Ukraine has never been more urgent, considering the ongoing full-scale war with Russia, which has been underway since 24 February 2022. War affects not only human lives but also the environment. The missiles and drones that Russia systematically fires at Ukrainian cities contain complex organic compounds and chemical elements that are hazardous to people and the environment in which they live. As a result of hits to infrastructure and various industrial facilities, a considerable amount of hazardous chemicals is released into the atmosphere and water bodies. Such emissions of harmful substances threaten to destroy rare species of animals, birds, and plants. Meanwhile, the explosion of the Kakhovka dam caused massive damage to the Ukrainian flora and fauna, obliterating everything and everyone who could not escape.

Various land-based military equipment and its destruction, laying of landmines, creation of trenches – all this threatens to destroy the fertile chernozem soils of Ukraine. As a result of the prolonged use of military equipment, many toxic elements, including persistent organic pollutants and polycyclic aromatic hydrocarbons, enter the soil, which again leads to soil degradation and loss of agricultural productivity (Hryhorczuk *et al.*, 2024; Ovchinnikov, 2024). Y. Kornieiev (2021)

investigated the term “environmental security” by analysing Ukrainian regulations. The researcher contrasted this term with the term “environmental hazard” and correlated the term “environmental security” with the term “national security”. The study found that the state is the guarantor of environmental safety and outlined the regulatory framework for hazardous environmental facilities and the relevant requirements. The researcher emphasised the necessity of observing Ukrainian legislation as a whole, as environmental regulations are incorporated in many legal documents.

N.A. Makarenko and O.Y. Makarenko (2024) investigated the topical issue of ensuring environmental safety at the legal level during martial law. The researchers emphasised the significance and necessity of creating a programme that would record the damage caused, as well as the need to make direct changes to the legislation. D. Hryhorczuk *et al.* (2024) conducted a thorough analysis of the effects of the war on the environment and argued that the hostilities caused the release of chemicals into the air, soil, and water. The researchers also provided evidence that 30% of Ukrainian territory is contaminated by landmines and unexploded ordnance. According to their study, the Ukrainian state has suffered not only human losses but also faced an environmental

catastrophe. K. Kozmuliak (2022) analysed not only the impact of Russian armed aggression on the environment of Ukraine and thoroughly investigated the issue of its legal regulation. The researcher addressed the need for mandatory compliance with Ukrainian legislation and international law. The study demonstrated the effects of environmental pollution on environmental rights and freedoms. The researchers examined the issue of damage caused to the environment by Russian aggression and emphasised the need to follow Directive 2004/35/EC of the European Parliament and of the Council "On Environmental Liability with regard to the Prevention and Remediation of Environmental Damage" (2004) to properly establish damages, as the damages calculated by Ukrainian law do not correspond to reality and international standards.

S. Zarei and N. Mosavi Madani (2020), investigated the protection of environmental security at the international level in the 21st century. Specifically, based on the analysis of global and regional cooperation, as well as institutional and non-institutional cooperation. The researchers found that the key factor in the implementation of international environmental law is the institutionalisation of international cooperation. They also noted a new area of cooperation in this sphere – the private sector (non-governmental international organisations). The researchers emphasised the key role of these organisations in environmental cooperation.

T. Rebhi and I. Bouderbala (2023) investigated international environmental legislation. They argued that environmental protection began to be addressed only after the onset of industrial development, global warming, wars, and population growth. The researchers emphasised the significance of improving environmental legislation, establishing a judicial body for environmental protection, raising public awareness of environmental protection, and ensuring the rational use

of natural resources. R. van Steenberghe (2023) identified the impact of wars on the environment and the interaction between such types of law as international humanitarian law and environmental law. The researcher argued that the *lex specialis* principle is effective in resolving conflicts over the rules or interpretation of international humanitarian and environmental law, and the principle of systemic integration regarding the translation of their provisions.

Overall, the study of environmental security is at a fairly advanced level due to the relevance of this issue. Researchers have addressed the notion and content of environmental security and the environment, including on the territory of Ukraine under martial law. However, fewer researchers have been interested in the issue of ensuring legal regulation of environmental safety in Ukraine and have directly analysed legislation in this area. The purpose of this study was to examine the current state of environmental safety in Ukraine, considering the impact of military operations on the environment, and to analyse Ukrainian legislation on this issue. The principal objectives of the study were as follows:

- to define the essence of environmental safety, its concept, features, and content;
- to analyse Ukrainian and international regulations governing environmental safety;
- to establish the legal regulation of crimes against the environment in Ukraine.

Materials and Methods

Since the subject of the study primarily concerns the legal sphere, to interpret the legal acts and analyse them, the study employed the terminological method to investigate the concept and content of environmental safety, environment, national security, martial law, etc. Thus, during the study of national legal acts, the provisions of the following regulations were reviewed and analysed: the Constitution of Ukraine (1996), the Law of Ukraine No. 1264-XII

"On Environmental Protection" (1991), the Law of Ukraine No. 2469-VIII "On National Security of Ukraine" (2018), the Law of Ukraine No. 2697-VIII "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine until 2030" (2019), and the Criminal Code of Ukraine (2001). International treaties ratified by Ukraine and those that will be ratified as a result of future EU membership play a significant role in the legal regulation of environmental safety. These include the Consolidated Version of the Treaty on the Functioning of the European Union (2012); the United Nations Framework Convention on Climate Change (1992); the Montreal Protocol on Substances that Deplete the Ozone Layer (1987); the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989); the Convention on Biological Diversity (1992); the Stockholm Convention on Persistent Organic Pollutants (2001); Directive of the European Parliament and of the Council No. 2024/1203 (2024); the Additional Protocol to the Geneva Conventions (1977); the Rome Statute of the International Criminal Court (1998); the Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques (1976).

A special place among the general theoretical methods used in the study was taken by the historical method. Its use helped to trace the historical development of the notion of environmental security. The comparative method helped to identify the factors affecting the state of the environment in Ukraine. Specifically, when comparing military factors and the effects of industrial facilities on the environment. The method was also employed to systematically compare Ukrainian and international legislation.

Results

The concept and features of the phenomenon of environmental safety. The emergence of the concept of environmental safety is intricately

linked to the field of environmental health and safety. The term "environmental health and safety" was coined by the National Safety Council in the early 1970s to ensure the safety of industrial workers and prevent environmental pollution (Captions, n.d.). Since anthropogenic factors directly affected the state of the environment, and in case of negligence or carelessness, an environmental disaster could be caused. In the 1987 Brundtland Report, the World Commission on Environment and Development (WCED) was perhaps the first to highlight the correlation between environmental disaster and conflict. In this document, a broader definition of security was proposed, which includes not only the protection of a country's territory and state sovereignty, but also the dangers arising from environmental degradation at multiple levels – local, national, regional, and global (Carius *et al.*, 1999).

Overall, WCED argued that the concept of security as it was commonly understood at the time – in the context of political and military threats to state sovereignty – needed to be further expanded to include growing environmental stress. Although environmental conditions have rarely been the primary cause of severe conflicts within countries or internationally, they can be part of the causal chain associated with conflicts, and in some cases, they can play a leading role (Carius *et al.*, 1999). As an example, the drought in Syria in 2006-2010 played a significant role in the growth of social tensions in the country. Specifically, due to the large-scale crop failure and displacement of villagers, complaints about the activities of the Syrian government and its distribution of natural resources increased (resulting in the Syrian Civil War) (UNFCCC, 2022). Another example of a comparable cause-and-effect relationship that affected several countries at once is the decline in the natural resources of the aquatic environment in Lake Chad. This sparked controversy and adversely affected the livelihoods of

people in Chad, Niger, Cameroon, and Nigeria (van Jaarsveld Bronkhorst & Bob, 2010).

Environmental protection generally refers to the functioning of institutions and departments that regulate the state of the natural environment, including control over the quality of air, water, food, soil, goods, and activities, with a view to ensuring public health and welfare. In the context of environmental protection, social well-being in general refers mainly to ecosystems of various scales, from habitats to the entire planet (Coronado *et al.*, 2009). In terms of regulating environmental safety in Ukrainian legislation, Article 50 of the Law of Ukraine No. 1264-XII "On Environmental Protection" (1991) prescribes the concept of environmental safety, specifically, it states that environmental safety defines the state of the environment in which deterioration of the environmental situation and threats to the health of Ukrainian citizens should be prevented. This is achieved through the implementation of various economic, political, legal, technical, and organisational measures that are interconnected. Overall, the population of Ukraine is provided with environmental safety through a variety of comprehensive actions. For instance, this article mandates that in case of environmental damage caused by individuals or legal entities, the court may decide to terminate their activities.

Thus, environmental safety refers to certain standards and measures that protect the environment from hazards and ensure the safety and social well-being of employees and the population living near industrial facilities, thereby preventing accidental damage to the environment. Environmental safety is a part of the broader concept of national security. This relation is mandated in Article 3 of Law of Ukraine No. 2469-VIII (2018), thereby effectively stating the obligation and significance of ensuring it.

As for the notion of the environment, there is no precise definition of this term in legislation. However, it can be defined as the delicate

interweaving of life and the means of sustaining it, called the biosphere, which includes air, soil, water, and living organisms (Human health and the natural environment, n.d.). Typically, the environment includes industrial facilities, workplaces, and laboratory facilities. Generally, environmental safety is one of the key issues for any industry, as failure to follow environmental safety rules and standards can have consequences not only for the industrial enterprise but also for the entire ecosystem (Anderson, 2025).

The environmental safety is described by the following specific features:

- the global nature and prevalence of environmental disasters and their effects on environmental safety. This means that the environmental problems of a certain territory are not limited to it exclusively, but in most cases spread to other territories (specifically, to the territories of other states or even continents). For example, certain local environmental pollution can cause global environmental disasters (oil spills into a river that flows into the sea – the pollution started in a small area of one city but eventually will lead to environmental pollution in several countries). As an example, regular oil spills into the Nigerian aquatic environment have devastating consequences not only for the flora and fauna of the Niger Delta, but also for the entire marine environment (Ikhumetse *et al.*, 2022; Ewim *et al.*, 2023);

- ensuring counteraction to environmental disasters and their consequences. This statement implies that it is easier to prevent a disaster than to handle it later. Specifically, if managers of enterprises or other institutions adhere to safety regulations established not only at the national but also at the international level, and most importantly, do not neglect them and monitor their compliance, this will help prevent the release of harmful substances into the environment;

- rational satisfaction of environmental needs, which involves ensuring the fundamental

right to a healthy environment. Accordingly, policies designed to improve environmental safety should factor in the diverse needs of society and the desire for social equality and inclusion in this area.

➤ inextricable link between environmental security and security in society (in the state). This is because in most cases, even a small environmental problem has global implications, which can lead to conflict not only within the state but also internationally. Environmental degradation can lead to the destruction of rare species of plants and animals, as well as damage to the source of natural resources, which will lead to violations of national and international law. An example is the Nile conflict – the construction of the Great Ethiopian Renaissance Dam on the Blue Nile River in Ethiopia. It was created to improve the system of electricity supply directly to Ethiopia and other countries. This conflict originated over the right to the water environment between Ethiopia, Egypt, and Sudan (Egypt and Sudan consider the construction of the dam to be a violation of the security of their water space) (Etichia *et al.*, 2024). This situation demonstrates how a local environmental problem can escalate into a global issue. That is why there is a need to monitor compliance with the safe state of the environment, etc. These features reflect the vulnerability of environmental security to various disasters, as well as their global and destructive environmental impacts.

Legal regulation of environmental safety in Ukraine. The legal basis for ensuring environmental safety in Ukraine is its national regulations. International treaties ratified by Ukraine play a crucial role in the legal regulation of environmental safety. These documents reinforce the significance of environmental safety and protection at the international level. Most of them prohibit the release of chemical or other hazardous substances into the environment, as well as the use of chemical weapons, ensure the protection of rare animals

and plants, and are generally aimed at protecting the environment in all its manifestations.

The principal source of environmental security and its significance in Ukraine is the Constitution of Ukraine (1996). Article 3 stipulates security as one of the highest social values of a person, and the concept of security in this case includes environmental security. Specifically, Article 13 contains a list of natural objects and establishes that they belong to the Ukrainian people. These objects include land, air, and water, as well as the resources they contain. Article 16 contains a concrete provision on the obligation to ensure and protect environmental safety on the territory of Ukraine, along with the preservation of the Ukrainian gene pool and the solution of environmental problems that arose as a result of the Chornobyl nuclear power plant (ChNPP). Another regulation directly governing environmental protection and environmental safety is the Law of Ukraine “On Environmental Protection”.

Article 3 of this Law of Ukraine No. 1264-XII (1991) contains guiding principles related to environmental protection, including the obligation to follow the legislation in the field of environmental safety; ensuring preventive measures to maintain a safe condition; guaranteeing a safe environment; creating safe conditions for the existence of species diversity; ensuring free conditions for the use of general natural resources and paid conditions in the case of special ones; solving environmental problems according to the Ukrainian legislation; international cooperation, etc.

Section XI of the Law of Ukraine No. 1264-XII (1991) provides information on measures to ensure environmental safety, specifically, it includes provisions on the use of hazardous substances and the obligation to follow the rules for working with such substances to prevent their release into the environment. Thus, the law introduces the preventive nature and significance of preventing an environmental disaster.

Specifically, part 4 of Article 3 defines environmental safety as one of the areas directly addressed by the national security policy of Ukraine. The Law of Ukraine No. 2697-VIII "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine until 2030" (2019) plays a significant role in the legal regulation of environmental safety, which is the principal document demonstrating current problems in the policy of ensuring a safe environment.

Thus, among the primary causes of environmental problems in Ukraine, the Law of Ukraine No. 2697-VIII (2019) identifies a considerable number of operating energy, chemical, and other enterprises whose activities involve harmful chemical waste that is released into the air and water bodies. This leads to the next problem, namely the failure of such enterprises to follow Ukrainian legislation and the lack of concrete actions by the state in response to environmental offences. This is followed by the failure of state authorities to ensure the inevitability of punishment in case of an offence.

A direct role in environmental problems is played by the Ukrainian population, which is unaware of their actions and how they affect the atmosphere and nature. Illegal deforestation, setting fire to dry leaves, throwing rubbish in the wrong places, discharging harmful substances into the soil and water bodies, etc. All these actions have harmful consequences for the environment. Insufficient funding for environmental protection, as evidenced by outdated equipment at state-owned enterprises that emits harmful substances, poor condition of water drainage and treatment facilities, and limited funding for environmental measures to improve the environment. Insufficient area of the nature reserve fund, which is a habitat for rare animals, birds, and plants. According to the Law of Ukraine No. 2697-VIII (2019), the nature reserve fund in Ukraine accounts for 6.6% of the

country's total area, while the European Union (EU) states distribute approximately 21% of their land for protected areas.

The Law of Ukraine No. 2697-VIII (2019) contains a list of strategic goals and objectives to address current environmental issues to be achieved by 2030. Thus, the key goals and objectives include 1) to ensure the achievement of a balanced state of development by 2030, which involves minimising dependence on non-renewable natural resources, while reducing environmental pollution to an acceptable level; 2) to implement an effective management system to ensure the rational use of natural resources, accounting for future needs; 3) to develop and implement state planning documentation, considering measures to eliminate the consequences of Russian military aggression; 4) to take measures for the rational use of natural resources, their monitoring, analysis, and reporting; 5) to create better conditions for the conservation of Ukraine's biodiversity; 6) to ensure continuous supervision over compliance with environmental legislation; 7) to implement EU legislation on environmental protection; 8) and to develop strategies to improve air, water, and soil quality. Overall, the Ukrainian legal framework for environmental protection is quite developed, but the problem lies in the implementation of these legal documents. The analysed Law of Ukraine No. 2697-VIII "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine until 2030" (2019) repeatedly mentions the obligation to follow the environmental legislation and the need for constant state supervision over its observance.

EU legislation in the field of environmental protection. Considering the events of recent years, Ukraine has begun the final path to EU membership. Since June 2024, the negotiation process on Ukraine's accession to the EU has been open. This effectively meant amending Ukrainian legislation in line with EU standards and rules, as well as ratifying international treaties binding on

the EU. This necessitated an analysis of not only Ukraine's current legal framework for ensuring environmental safety, but also international legislation on the subject. According to Articles 11 and 191-193 of the Consolidated Version of the Treaty on the Functioning of the European Union (2012), the EU is the competent authority in the field of environmental policy. Its powers include air and water pollution, waste management, and climate change. In turn, EU policy requires compliance with four binding principles, namely:

- precautionary approach means refraining from taking an action or policy that could cause damage to the environment or public health until there is certainty that it is safe to do so;

- prevention, which implies preventing environmental damage in the first place, and only then responding to it. Specifically, this principle is aimed at taking preventive measures to anticipate and avoid violations of environmental safety;

- if environmental pollution has already occurred, first of all, measures should be taken to clean the area where the pollution occurred;

- the "polluter pays" principle – this principle imposes liability on the perpetrator and their obligation to take measures to eliminate the damage caused and to pay the relevant costs. This principle is implemented within the framework of the Environmental Liability Directive, which aims to prevent or remedy environmental damage to protected species or natural habitats, waters, and soils (Environment policy: General principles and basic framework, n.d.). Compliance with these EU principles is a guarantee of environmental safety in international society. Overall, international treaties play a crucial role in the legal regulation of environmental safety, as most countries that have ratified them recognise the primacy of international law.

One of the major documents regulating environmental security is the United Nations Framework Convention on Climate Change (1992). This Convention is aimed at addressing the problems

arising from climate change. Specifically, Article 2 of the Convention aims to achieve a reduction in the level of greenhouse gases in the air to prevent harmful effects on the climate (reflecting the EU's basic principle of precaution). Thanks to the Convention, the infrastructure and policies that today serve as the foundation for combating climate change have begun to develop at the international and national levels. First of all, this concerns the measurement, monitoring, and documentation of harmful emissions and their consequences, as well as the implementation of various scientific studies to address the effects of climate change. However, the most significant result of the adoption of this Framework Convention is that this document laid the groundwork for the creation of the Kyoto Protocol of 1997 (relating to the reduction of greenhouse gas emissions), the Paris Agreement of 2015 (preventing global warming) and the Glasgow Climate Pact in 2021. The latter aims to "turn the 2020s into a decade of climate action and support" (What is the UN framework..., n.d.). Another global treaty is The Montreal Protocol on Substances that Deplete the Ozone Layer (1987), which aims to protect the ozone layer by phasing out the production and consumption of substances that deplete the ozone layer. The Protocol regulates the production and consumption of almost 100 synthetic chemicals that deplete the ozone layer. Compliance with the Protocol has reduced the concentration of harmful substances in the atmosphere, which helps to protect and strengthen the ozone layer to this day (Basel Convention..., 1989).

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989) aims to reduce the production of hazardous waste, promote safe waste treatment (e.g., waste separation into separate categories), and ensure an effective system of international hazardous waste transport. The Convention on Biological Diversity (1992)

(ratified by Ukraine in 1994) is essential for ensuring biodiversity security, covering ecosystems, various species of flora and fauna, and genetic resources. Overall, this Convention aims to protect and conserve biological diversity, ensure the sustainable use of its elements, and promote the equitable sharing of benefits arising out of the utilisation of genetic resources. Due to its wide recognition, the Convention has become a powerful legal instrument, and its sections on public awareness, education, and the protection of women's and indigenous peoples' rights are gaining in significance (The European Green Deal, 2019). The Stockholm Convention on Persistent Organic Pollutants (2001) aims to protect and safeguard public health and the environment from hazardous chemicals. The Convention regulates persistent organic pollutants (POPs) and requires the parties that have ratified it to make every effort to reduce and eliminate these POPs, as well as their production and distribution.

The EU's legal framework for ensuring environmental safety includes an entire range of international treaties that regulate this issue in certain ways. Generally, the environmental treaties address the following issues: air, water and soil pollution; waste management; protection of biodiversity and genetically modified organisms; assessment of the impact of hazardous substances on the environment; pollution control, etc. The European Green Deal (2019) was a major step towards improving the environment in 2019. The agreement provides strategies for transforming the European economy into a competitive and, most importantly, sustainable one by turning climate and environmental challenges into opportunities in all policy areas. It stipulates the core elements of the Green Deal, which define its objectives: achieving zero greenhouse gas emissions by 2050 (the target for 2030 is to reduce gas emissions by 55%); ensuring a pollution-free environment by 2050; updating environmental protection

legislation in line with the new goals; creating a sustainable production policy to use fewer materials and create products that can be reused and recycled; preparing for "clean steel production" based on hydrogen by 2030 (Decision of the European Parliament and of the Council No. 2022/591, 2022). Ukraine, as a future EU member state, has acceded to the Agreement, and in 2020, a climate change coordination group was established in Ukraine under the Agreement. However, with the onset of the full-scale invasion, Ukraine's path to the Green Deal was suspended. It became a challenge to achieve the Agreement's goals, as the number of environmental violations increased dramatically due to constant shelling and military operations and continues to grow every day.

The last, but no less crucial legal document is Directive of the European Parliament and of the Council No. 2024/1203 (2024). The updated Directive sets out the basic rules for defining criminal offences and penalties to better protect the environment and defines measures to prevent and combat environmental crime. The Directive is binding, and if ratified by Ukraine, the state will have to amend its criminal legislation. In particular, the updated Directive adds new categories of environmental offences. These include illegal ship recycling and water intake; major violations of EU chemicals and mercury legislation; sale on the market and export of products in breach of Directive of the European Parliament and of the Council No. 2024/1203 "On the Protection of the Environment through Criminal Law and Replacing Directives 2008/99/EC and 2009/123/EC" (2024). In the future, this Directive will be essential for defining and imposing penalties for environmental crimes and ecocide in Ukraine caused by the invasion of the Russian armed forces.

Legal regulation of environmental crimes caused by military operations in Ukraine. The full-scale invasion of the territory of Ukraine by the Russian armed forces had devastating

consequences not only for the Ukrainian population, but also for the Ukrainian environment. Constant missile attacks (missiles are fired with toxic fuel), the use of drones, the laying of land-mines, the blowing up of dams (including the Kakhovka reservoir), the use of chemical weapons, and the unrest at nuclear power plants have all led to dramatic changes in Ukraine's nature. The Ministry of Agrarian Policy of Ukraine estimated that up to 95,000 tonnes of adult fish worth over USD 108 million could be destroyed as a result of the Kakhovka dam's destruction. The total damage to all bioresources could be 2.6 times

greater (Kasyanchuk & Kostenko, 2024). As a result of the massive attacks on the Ukrainian electricity grid, there have been many cases of uncontrolled leaks of the most potent greenhouse gas, SF₆ (sulphur hexafluoride) (International Renaissance Foundation, 2024). This is only the smallest part of the damage done to Ukraine's environment. The State Ecological Inspectorate of Ukraine has provided up-to-date information on the environmental damage caused by the hostilities, which is presented in Table 1. Environmental damage caused in the period from 24 February 2022 to 20 September 2024.

Table 1. Scale of environmental damage

Natural environment sector	Damage caused	Damages incurred (in UAH)	Scale of damage (in tonnes, hectares, m ² , kg, m ³ , pcs.)	Change in losses incurred (compared to the previous week)	Change in the extent of damage (compared to the previous week)
Atmosphere	Combustion of petroleum products	UAH 138.4 bn	3.07 mn t	+ 90.2 mn UAH	+ 2.0 thsd t
	Forest fires	629,3 bn UAH	84.4 thsd ha	+ 41,4 mn UAH	+ 6,0 thsd ha
	Other fires	5.9 bn UAH	1.9 mn m ²	–	–
Water	Pollution of water bodies	48.9 bn UAH	2,1 thsd t	–	–
	Pollution of water bodies	9.0 bn UAH	37.3 mn kg	–	–
	Unauthorised use of water resources	26.8 bn UAH	20.9 bn m ³	–	–
Land	Land pollution	1.13 tn UAH	21.0 mn m ²	+ 432.9 mn UAH	+ 1.1 mn m ²
	Land contamination	18.4 bn UAH	962.6 thsd m ²	+ 196.7 mn UAH	+ 17.4 thsd m ²
NRF	Damage to the flora	94.2 bn UAH	21.1 thsd ha	–	–
	Number of trees and plants destroyed and damaged	506.5 bn UAH	9.7 mn pcs.	–	–

Note: NRF – nature reserve fund, UAH (Ukrainian hryvnia), thsd (thousand), mn (million), bn (billion), tn (trillion), t (metric tonne), ha (hectare), m² (square metre), kg (kilogram), m³ (cubic metre), pcs (pieces)

Source: compiled by the authors of this study based on data from the State Environmental Inspectorate of Ukraine (2024)

Articles 16 and 50 of the Constitution of Ukraine (1996) stipulate not only the human right to a safe environment, but also the offender's obligation to compensate for the damage caused, which implies that citizens should perform functions of environmental protection and maintain ecological balance on their territory. The Criminal Code of Ukraine (2001) contains Article 441, which imposes liability for mass destruction of flora and fauna, and poisoning of the environment (ecocide). The Ukrainian state and its government most often file charges against Russia with the international community in connection with this Article.

Damage to the environment is usually a phenomenon that extends over the territory of several countries. If this damage is caused by military actions, it can lead to an environmental catastrophe on a global scale. That is why it is necessary to consider international legislation concerning the damage caused by Russian aggression. War crimes against the environment are regulated by international humanitarian law. There are many regulations that prohibit the use of such means of warfare that cause damage to the environment. Among such treaties, the Additional Protocol to the Geneva Conventions (1977) should be highlighted. Thus, Article 35 (3) of Protocol I contains a prohibition on the use of methods of warfare that are harmful to the environment (specifically, Article 55 contains a similar prohibition). Protocol I was ratified by Ukraine and entered into force in 1990, which means its implementation into Ukrainian legislation and further application.

Protocol I is considered the most comprehensive and effective regulation that ensures not only the protection of the environment in times of war but also guarantees fair consequences in case of violations of the Protocol's provisions. And in the situation of violations of the provisions of Protocol I by the Russian armed forces, it would be reasonable to define offences and apply sanctions

according to this Protocol I (Albakjaji, 2022). Article 8 of the Rome Statute of the International Criminal Court (1998) prohibits intentional damage to the environment by the military if it would have severe and long-term consequences for environmental safety. However, the Statute contains a gap in the definition of ecocide, which makes it impossible to establish precise responsibility for Russian crimes. ENMOD (1976) is another direct source that ensures environmental safety and prohibits the use of military actions that have consequences for nature. This Convention is "the first and, so far, the only agreement directly aimed at combating the means and methods of environmental warfare" (From ENMOD to geoengineering..., n.d.). Ukraine's ratification of ENMOD will be a crucial step in combating the consequences of Russian aggression and bringing Russia to justice.

The environmental damage caused by the hostilities in Ukraine has devastating consequences for many areas of the country, which is why there is a need to improve Ukrainian legislation. Overall, Ukraine has secured a legal framework for addressing environmental safety issues, but it proved to be ineffective in peacetime. Considering the martial law, there is a need to develop and implement international acts that directly address the consequences of military operations and establish liability for them. International legislation also contains gaps, particularly concerning the regulation of environmental safety during non-international armed conflicts (despite the abundance of regulations in the field of environmental safety) (Kenig-Witkowska, 2019). International humanitarian law plays an integral role in the protection of the natural environment during hostilities, but this area of law is quite variable and progressive. As a result, it is not possible to fully ensure this protection due to the emergence of new methods of warfare and the lack of relevant rules that would address the problem (Mutuma, 2021).

The consequences of Russia's invasion of the natural environment may affect not only the territory of Ukraine but also European countries (specifically, explosions in Moldova and the Russian Federation itself). Hazardous substances can spread through groundwater, wind, and rivers that cross the territories of several countries. Specifically, the situation at Zaporizhzhia NPP is tense due to a decrease in safety, which could lead to a nuclear disaster that would affect the entire Europe. This points to the need to engage the international community to jointly develop measures to improve the environmental safety system.

Discussion

Since 2014, Ukrainian territories have been subjected to systematic attacks by the Russian armed forces, which has global implications for the entire ecosystem of Ukraine. The bulk of mineral resources are in the occupied Donbas, which is why Donetsk region is considered a mining region. Due to systematic rocket attacks in Donbas, these mines are under constant threat, as is Ukraine's environmental security. When such facilities are hit, hazardous substances penetrate deep into the soil and, as a result of chemical compounds with minerals, penetrate the country's groundwater. And since the start of the full-scale invasion in 2022, not only mines, but also any rocket attacks and military operations throughout Ukraine pose an environmental threat.

W. Leal Filho *et al.* (2024) thoroughly examined the impact of various techniques and means of warfare on the environment. For example, they argued that military vehicles emit greenhouse gases and other toxic substances, which leads to dangerous air and soil pollution. Missile strikes, bombing, and other use of explosives directly cause changes in soil structure. As a result, the composition of soil microflora is disrupted, which negatively affects the vital activity of microorganisms and reduces the availability of

nutrients, thereby further exacerbating the environmental impact.

These statements consider the direct impact of military equipment on the environment of Ukraine, and especially the impact of hazardous chemical elements on it. Their study and analysis were extremely important for this study, as it allowed us to deepen the results already obtained. In most cases, the findings of this study were quite comparable, but W. Leal Filho *et al.* (2024) nevertheless investigated the impact of military operations on environmental safety in greater detail. V. Ladychenko (2019) also studied the problem of environmental protection legislation. Specifically, the researchers emphasised the ineffectiveness of the Environmental Inspectorate of Ukraine, the imperfection of the Criminal Code of Ukraine (2001) in terms of limiting environmentally hazardous activities (e.g., the Code does not prescribe punishment for international trade in endangered species of wild animals and plants, which is not in line with international obligations). Again, it is noted that there is no effective legislation to ensure the correct calculation of environmental damage. Author points out that among the most serious and at the same time urgent problems are the ineffectiveness of legislation on calculating environmental damage and the inconsistency of the existing damage calculation system with international standards; as well as gaps in criminal law regarding the lack of liability for certain types of environmental offences. This study was aimed directly at investigating the legal regulation of environmental safety in Ukraine, specifically, considering the effects of martial law on it. It examines the provision of environmental safety in national and international legislation and makes provision for an analysis of the legislation that prescribes this provision.

Comparing the findings of the above-mentioned researchers with those of the present study, certain joint conclusions were reached.

Specifically, that as of 2024, there is a need to strengthen cooperation between the world's leading countries, as well as with international organisations involved in environmental protection. The same applies to ensuring environmental safety not only in a concrete region, but also in the entire international society. As the historical consequences of environmental disasters (the nuclear bombing of Hiroshima and Nagasaki, as well as the Chernobyl accident) demonstrate, it is easier to prevent such a disaster than to fight its consequences for decades. It is to prevent an environmental catastrophe caused by military action on the territory of Ukraine that the world must unite to create measures that will not only help to gradually clean up dangerous affected areas but also ensure reliable protection of important strategic facilities and infrastructure. The scale of a potential future environmental disaster cannot be predicted, but it is likely that it will affect the territory of other states. Therefore, the international community must consider this factor and do everything possible to prevent devastating consequences.

There is a need to amend the national legislation of Ukraine to fill the existing gaps and create an effective system of environmental protection, as well as to ensure environmental safety. The study revealed a problem with the definition of the term "environment", as it was not found in either national or international regulations. Specifically, there is a discrepancy between Ukrainian legislation and international standards in calculating environmental damage, which calls into question the correctness of the Ukrainian authorities' assessment of such damage.

Updating Ukrainian legislation in line with international standards and regulations will help to respond effectively and, most significantly, promptly to new offences relating to Ukraine's environmental safety. At the same time, strengthening the existing relations between the Ukrainian state and the international community will help

to combat the consequences of Russian aggression on the environment. As a result of the study, it was concluded that martial law in Ukraine and active military operations have a large-scale destructive impact on the environment of Ukraine (Meaza *et al.*, 2024). That is why effective legal regulation of environmental safety is so critical, since, if Ukrainian legislation, Ukrainian citizens, and the Ukrainian authorities are constantly disregarded, the situation may get out of control and escalate into an environmental disaster.

Conclusions

This study defined the concept and content of environmental security, traced the formation of this concept, and identified the factors that influence its provision, and analysed the regulatory framework for environmental protection and environmental security. In terms of the essence of environmental security, it is a set of measures aimed at ensuring the protection of the environment from hazardous factors (in the present study, from military equipment and military operations).

The key factors affecting the state's ecosystem include hits to industrial and infrastructure facilities, which are extremely dangerous, as they result in large-scale releases of hazardous substances into the air, soil, and water; landmines that can explode at any time, releasing harmful substances deep into groundwater; the creation of trenches; and the use of military equipment – all of which are gradually destroying the Ukrainian environment. The study analysed the most effective regulations and their role in environmental protection. Specifically, the legislation should ensure environmental safety in Ukraine, protect the natural environment, and create a system of measures to prevent and resolve the consequences of an environmental disaster. The Law identifies the most serious environmental problems as follows: non-compliance by industrial facilities with environmental legislation, as well as

insufficient supervision by the competent authorities over its observance; human factors (burning leaves, dumping garbage in inappropriate places); insufficient funding in the natural sector; outdated equipment; and limited nature reserves. Strategies to ensure environmental safety respond to these problems: control over compliance with the law; inevitability of punishment for offences; budget increases; expansion of reserves, etc.

The study revealed that the legal framework for environmental protection (including national and international regulations) is quite complete. However, the problem was found to be in direct compliance with the law by both states and citizens. Ukrainian legislation stipulates a system of monitoring environmental crimes, contains provisions prohibiting and establishing liability for any actions that may lead to global and long-term

pollution of the ecosystem. International treaties, in turn (including those ratified by Ukraine), establish legal liability for violations of environmental security by military actions and contain a direct prohibition on the use of methods of warfare that destroy the ecosystem. Prospects for further research are a thorough analysis of the methodology for calculating fugitive emissions of pollutants or a mixture of such substances into the atmosphere as a result of emergencies and/or during martial law and determining the amount of damage caused' in the context of this study.

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Conflict of Interest

None.

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Екологічна безпека та її правове забезпечення в Україні

Лісовський Сергій

Аспірант

Приватна установа Науково-дослідний інститут публічного права
03035, вул. Г. Кірпи, 2А, м. Київ, Україна
<https://orcid.org/0009-0002-2287-0587>

Людмила Головка

Кандидат юридичних наук, доцент

Національний університет біоресурсів і природокористування України
03041, вул. Героїв Оборони, 15, м. Київ, Україна
<https://orcid.org/0000-0002-3742-2827>

Анотація

Метою даного дослідження було здійснення аналізу законодавства України у сфері захисту навколишнього середовища, та виокремлення найбільш ефективних правових актів, що стосуються забезпечення даного захисту. Зокрема, враховуючи аналіз стану природного середовища України, з початку повномасштабного вторгнення російських збройних сил на територію України. Для ефективного дослідження теми, важливим було застосування історичного та термінологічного методів. У дослідженні розкрито сутність екологічної безпеки, її поняття, зміст та особливості, зокрема, продемонстровано роль екологічної безпеки у правовому забезпеченні захисту навколишнього природного середовища України. За допомогою становлення поняття екологічної безпеки, було виокремлено фактори, які впливають на її забезпечення (зокрема екологічні катастрофи, спричинені техногенними чинниками), а також доведено важливість та необхідність встановлення ефективного правового регулювання даного питання. Було проаналізовано законодавство у сфері природного середовища та забезпечення його безпеки, зокрема, досліджено найбільш вагомні правові документи. А також визначено вплив військових дій (включаючи вплив військової техніки, зброї, та хімічних речовин, які вони виділяють) на забезпечення правового регулювання у сфері захисту природи. У результаті дослідження, було надано правове визначення поняття екологічної безпеки та її особливостей, а також продемонстровано фактори, що впливають на забезпечення безпеки природного середовища. Зокрема, було проаналізовано правове регулювання у сфері забезпечення безпеки навколишнього природного середовища. Тоді як дослідження найбільш вагомих правових документів у даній сфері, допомогло виокремити перелік завдань, які допоможуть покращити екологічний стан в Україні. Отже, дане дослідження демонструє стан правового забезпечення безпеки навколишнього природного середовища в Україні за даними на 2024 рік та допоможе під час подальшого реформування екологічної політики

Ключові слова: навколишнє природне середовище; законодавство; нормативний акт; військові дії; повномасштабне вторгнення



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Implications of public interest for the implementation of the registration of transfers of land rights due to inheritance by the Land Office

Novi Chintya Kurniawati*

Postgraduate Student
Brawijaya University

65145, 169 Jl. MT. Haryono, Malang, Indonesia
<https://orcid.org/0009-0003-2094-8552>

Hanif Nur Widhiyanti

Doctor of Law

Brawijaya University

65145, 169 Jl. MT. Haryono, Malang, Indonesia
<https://orcid.org/0009-0003-6100-382X>

Patricia Audrey Ruslijanto

Doctor of Law

Brawijaya University

65145, 169 Jl. MT. Haryono, Malang, Indonesia
<https://orcid.org/0009-0006-6621-832X>

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Abstract

The registration of transfers of land rights due to inheritance plays a crucial role in the Indonesian land law system. The Regulation of the Government of the Republic of Indonesia No. 24 "On Land Registration" established two mechanisms for this process: the Deed of Joint Right Division and the Deed of Inheritance Property Division. This study aimed to analyse the factors

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*Corresponding author

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that contribute to the reluctance of Land Offices to accommodate the Deed of Inheritance Property Division as a valid option for inherited land registration. A socio-legal research method was employed, involving interviews with Land Office officials and a review of relevant legal documents. It was found that, in practice, these regulations are not implemented consistently across all Land Offices, with some offices only recognising the Deed of Joint Right Division as a valid registration instrument. This inconsistency leads to administrative inefficiencies and financial burdens for the public, including prolonged procedures and double taxation due to the mandatory name change prior to the division of inheritance rights. Additionally, this study examined the impact of this practice on administrative efficiency and legal certainty for the public. The findings revealed that discrepancies in regulatory implementation across different Land Offices result in procedural inconsistencies in inherited land registration. The Jember Regency Land Office, for example, prioritises the Deed of Joint Right Division over the Deed of Inheritance Property Division on the grounds of legal prudence, despite existing regulations permitting both mechanisms. The study confirmed that registration using the Deed of Inheritance Property Division was more efficient, as it requires only a single administrative stage and prevents double taxation. From the perspective of Jeremy Bentham's utilitarian theory, the Land Office's restriction of registration options does not fully maximise public benefit. To enhance efficiency and legal certainty in Indonesia's land administration system, policy harmonisation is essential. A more flexible approach should be adopted to ensure that individuals have the freedom to select the inheritance land registration mechanism best suited to their needs and circumstances

Keywords: inherited land registration; joint right division; inheritance property division; land and building acquisition duty; legal certainty

Introduction

The issue of the transfer of land rights due to inheritance is highly relevant, as it directly impacts legal certainty, administrative efficiency, and financial burdens on heirs. Although the Regulation of the Government of the Republic of Indonesia No. 24 "On Land Registration" (1997) provides two mechanisms for registration – the Deed of Division of Inheritance (APHW) and the Deed of Division of Joint Rights (APHB) – inconsistent implementation across Land Offices has created significant obstacles for the public. Some Land Offices require heirs to first transfer ownership collectively before dividing the land, despite the regulation allowing a direct transfer to a single heir. This additional administrative step increases the time and financial costs for heirs, often requiring them to pay extra taxes and undergo

lengthy bureaucratic procedures. The lack of uniformity in the application of land registration laws not only contradicts the principle of legal certainty but also imposes unnecessary burdens on individuals navigating inheritance processes. Addressing these inconsistencies is crucial to ensuring that land registration practices align with the legal framework and serve the best interests of the public. Therefore, this research is essential for identifying the root causes of these discrepancies and proposing policy recommendations to enhance efficiency and fairness in the registration of inherited land rights.

Previous studies have examined various aspects of land rights registration and inheritance, both in Indonesia and other countries. For instance, a study explored the implementation of

a participatory approach in land administration in Indonesia through the Complete Systematic Land Registration Programme, which has been shown to enhance the efficiency and accuracy of land certification data. Another study compared land regulations in Indonesia and the Netherlands, demonstrating that despite adopting different approaches, both countries face similar challenges in land ownership disputes (Roestamy *et al.*, 2022).

Several previous studies have addressed issues related to the implementation of regulations on the registration of transfers of land rights due to inheritance. Research has highlighted disparities across the application of policies in various Land Offices, some of which require all heirs to first carry out a collective name transfer process before the division of rights can take place. This adds an administrative and financial burden on the public, contradicting fundamental principles of land registration, such as simplicity, affordability, and transparency. A study by J. Clementine and M.F.M. Putra (2023) found that an informal inheritance division letter can serve as the basis for the transfer of land rights as long as it complies with the provisions set out in the Regulation of the Minister of Agrarian and Spatial Planning/Head of the National Land Agency of the Republic of Indonesia No. 16 (2021) (PMNA). However, this research also highlights that such a letter lacks the legal force authority of an authentic deed, meaning that if a signature is disputed, its validity may be challenged. For this reason, notarisation is considered a preventive measure to strengthen legal certainty in inherited land registration (Clementine & Putra, 2023). Meanwhile, H. Habibah (2022), in her study on the implementation of the registration of transfers of land rights due to inheritance at the Makassar City Land Office, found that registration can be completed with only a statement letter from the heirs appointing one of them as the rightful holder, without

the need for legal proceedings before a land deed official (PPAT). In practice, the transfer of rights can be directly registered at the Land Office without the need to follow the APHW or APHB mechanism, making the process administratively simpler and more efficient.

From these two studies, a gap in the research can be identified, which justifies this study. J. Clementine and M.F.M. Putra (2023) highlighted the legality of documents used as the basis for transferring inherited land rights, while H. Habibah (2022) focused on policy implementation at the Land Office level, which varies between regions. However, neither study has discussed in depth how inconsistencies in policy implementation impact the broader public interest. In addition, no previous research explicitly compares policies across various Land Offices in a single comprehensive study or examines their impact from the perspectives of legal certainty, administrative efficiency, and financial burden on the public. A study by S.L. Nugroho *et al.* (2024) highlights the legal implications of oral agreements preceding the formalisation of grant deeds, demonstrating the importance of official documentation in ensuring legal certainty and preventing disputes in land transactions.

Several international studies have also addressed similar issues in a broader context. D.A. Ali *et al.* (2021), in their research on land registration in Rwanda, found that although the country had successfully registered land on a national scale for the first time, the majority of land transactions in rural areas (87%) remained informal due to high costs and a lack of awareness regarding the importance of registering subsequent transactions. Similarly, R. Biddulph and E. Hillbom (2020), in their study of Tanzania, showed that despite the demand for land titling, complex registration procedures and high costs resulted in many transactions remaining unregistered, leading to uncertainty regarding the legal

status of land and exacerbating potential conflicts. Meanwhile, K.O. Asiama *et al.* (2019) examined the challenges of land consolidation in Ghana, emphasising the importance of accounting for social and cultural factors in land registration policies involving customary land.

Through this literature review, this study aimed to fill the existing gap by analysing the impact of inconsistent policies on the registration of the transfer of inherited land rights and offering solutions to improve legal certainty, administrative efficiency and reduce financial burdens. This study examines registration policies at various Land Offices, compares practices across several regions, and identifies factors that hinder the effective implementation of these policies.

An analysis of previous research reveals a gap between legal provisions and actual practices in the procedure for registering the transfer of land rights due to inheritance. As R. Rahmi and S. Sudjito (2020) found, this practice contradicts the principles of efficiency and legal certainty mandated by the Regulation of the Government of the Republic of Indonesia No. 24 (1997) and PMNA No. 16/2021 (2021). Therefore, this research aimed to fill a gap in academic studies, which have not sufficiently examined the misalignment between the implementation of this regulation and its underlying legal principles.

This study aimed to identify the key factors contributing to inconsistent registration of land transfers by way of inheritance and to provide policy recommendations for bringing the practice of land authorities in line with the current legal framework. Research objectives were to:

- 1) analyse the legal, administrative, and technical factors that contribute to the reluctance of Land Offices to fully implement the APHW following Article 42 (4) of the Regulation of the Government of the Republic of Indonesia No. 24 (1997);

- 2) evaluate the impact of policy inconsistencies on the public, focusing on administrative

obstacles, financial burdens, and legal uncertainty faced by heirs during the land rights transfer process;

- 3) develop policy recommendations to improve land registration practices, ensuring efficiency, affordability, and legal certainty for the public.

Materials and Methods

This study used the socio-legal method as conceptualised by I. Atikah *et al.* (2024), with a qualitative approach to examine inconsistencies in the implementation of regulations governing the registration of land rights transfers due to inheritance at various Land Offices, focusing on Jember Regency and Malang City. This method combines normative legal analysis with an empirical approach, involving interviews with Land Office officials. The approach was chosen due to a gap between the normative legal framework and its practical implementation, which results in variations in land administration policies across different regions.

The conceptual framework of this study was based on Jeremy Bentham's utilitarian theory, which states that a policy should provide the greatest benefit to society (Pratiwi *et al.*, 2022). In this context, the study evaluated whether the preference for the APHB over the APHW by Land Offices truly provides greater benefits or instead adds administrative and financial burdens on the public. This research relied on two main categories of sources: primary and secondary legal sources. The primary sources included legal and regulatory documents, such as the Regulation of the Government of the Republic of Indonesia No. 24 (1997), which serves as the principal legal foundation for registering the transfer of inherited land rights. Additionally, PMNA No. 16 (2021) outlines the mechanisms for inheritance distribution and the administrative procedures required for land registration. Another primary source was interviews with Land Office officials. To gain insight into the administrative challenges applicants face when

registering inherited land, in-depth interviews were conducted with ATR/BPN employees at the Jember Regency and Malang City Land Offices. The secondary sources included academic literature, such as journals and scientific articles discussing the registration of inherited land and administrative barriers within Indonesia's land system.

This study employed a statutory approach, an empirical approach, and qualitative data analysis. The statutory approach analysed legal frameworks, including the Regulation of the Government of the Republic of Indonesia No. 24 (1997) and PMNA No. 16 (2021), to ensure consistent legal application across Land Offices. The empirical approach included interviews with Land Office employees and case studies in Jember Regency and Malang City to assess regulatory implementation and challenges faced by the public. Surveys were conducted using in-depth (Fadhallah, 2021; Probe, 2022) and semistructured (Recruiteuse, 2024) interviews with ATR/BPN officials, notaries, and PPAT officials, focusing on procedures, policy variations, and obstacles in land registration. The Delphi method was applied in two stages to refine expert opinions on these challenges. All research adhered to ethical guidelines set by ICC/ESOMAR (2016), ensuring transparency, respondent privacy, and compliance with international ethical standards. Informed consent was obtained, and confidentiality was strictly maintained. Data analysis was conducted using qualitative descriptive methods, organising findings into key themes such as policy discrepancies and administrative barriers.

Results and Discussion

Dominant factors in the implementation of land rights transfer registration due to inheritance without using APHW. The registration of land rights transfers due to inheritance is part of the management of land registration data, which aims to ensure that the information contained in

land certificates remains accurate and reflects current ownership conditions. This process not only establishes legal validity for the heirs but also prevents potential disputes arising from discrepancies between the juridical data in the certificate and the actual ownership status. Therefore, an effective and efficient land registration system is crucial to supporting legal certainty for heirs.

In the context of inheritance-based land rights transfers, the Regulation of the Government of the Republic of Indonesia No. 24 (1997) establishes two mechanisms for registration, as outlined in Article 42, Paragraphs (4) and (5). These mechanisms represent two primary approaches to registering inherited land rights. The first approach involves the use of the APHW. According to Article 42, Paragraph (4) of the Regulation, land rights can be directly transferred to a single heir through an APHW issued by a notary. This deed serves as official proof that all heirs have agreed to transfer the land rights to one designated heir, allowing for immediate registration without requiring a prior name transfer to all heirs. The second approach relies on the APHB. As stated in Article 42, Paragraph (5) of the Regulation, if the inherited land must be divided among multiple heirs, or if no inheritance division deed exists at the time of registration, the land rights are first registered under the names of all heirs as joint owners. Under this mechanism, the name change must first be applied collectively before the land can be subsequently divided through an APHB, which is issued by a PPAT. Although both mechanisms are legally recognised, their implementation varies across regions. For instance, at the Jember Regency Land Office, registration policies tend to favour the APHB over the APHW. This practice prolongs the registration process, increases costs, and reduces efficiency for heirs who wish to register their rights directly through an APHW. The key differences between APHB and APHW are summarised in Table 1.

Table 1. Differences between APHW and APHB

Distinguishing aspect	Akta Pembagian Harta Warisan (APHW)	Akta Pembagian Hak Bersama (APHB)
Purpose	Separates inheritance into individual assets for certificates still registered in the name of the deceased	Separates inheritance into individual assets after certificates have been transferred into the names of all heirs (joint ownership)
Distribution	Allocated to a single heir in accordance with the agreement of the other heirs	Can be allocated to several multiple heirs or a single heir, depending on the agreement of the heirs
Authorised official	Notary, who records the agreement of the heirs and issues an official deed	PPAT, which issues the Deed of Division of Joint Rights
Stages of use	1. The applicant registers the transfer of rights using an APHW, with all heirs agreeing that land rights are transferred to one designated heir. 2. The APHW serves as the legal basis for registering the inheritance-based land rights transfer at the Land Office without requiring collective name transfer	1. The applicant must first transfer the inherited property into the names of all heirs at the Land Office. 2. If the heirs wish to divide the inherited land under joint ownership, they must use an APHB issued by a PPAT as the basis for registering the division at the Land Office

Source: developed by the authors based on research and interviews with staff from the Jember Regency Land Office

Several key factors have been identified that lead the Jember Regency Land Office to favour the APHB mechanism over APHW, despite both having the same legal force. One of these factors concerns differences in the interpretation of regulations. Although Article 42, Paragraphs (4) and (5) of the Regulation of the Government of the Republic of Indonesia No. 24 (1997) grants the public the option to choose between APHW and APHB, some Land Offices consider APHW to have a weaker legal force. Additionally, APHB is perceived as more legally robust because it involves a PPAT, who is administratively more directly involved in the land registration process than a notary. Another significant aspect is concern over potential future disputes. The Land Office fears that registering land using APHW without first completing the collective name transfer process could lead to conflicts, particularly if heirs who were not initially involved later assert claims to the land after registration. To prevent such disputes, authorities prefer to first transfer ownership to all heirs before registering the land under a single heir. Differences in internal administrative policies at the Jember Regency Land Office also play a role. Local policy requires all heirs to first change the

ownership name before dividing the land through APHB. This policy means that individuals cannot directly register a land rights transfer to a single heir using APHW without first completing the collective name transfer process. The administrative and financial burden on the community is another critical issue. The requirement to transfer ownership to all heirs before the land is divided results in two separate administrative stages, prolonging processing times and increasing costs. This policy also compels individuals to pay taxes twice – once for the collective name transfer process and again when rights are subsequently transferred to one of the heirs. Finally, a lack of public awareness further reinforces the preference for APHB. Many heirs are unaware that they have two registration options: APHW and APHB. Due to this lack of information, individuals often comply with Land Office guidance without realising that a faster and more cost-effective alternative is available.

Differences in interpretation regarding the implementation of APHW and APHB significantly impact society. First, legal uncertainty increases because the public struggles to understand the land registration procedure for inherited land, as it is applied inconsistently across different

Land Offices. Second, the administrative burden is heightened due to the requirement of ownership to all heirs before the division of rights occurs, even though this stage is not always necessary. Third, financial costs escalate because a prolonged procedure also increases tax and administrative expenses, thus placing a greater economic strain on heirs. As a solution, the Land Office should enforce regulations in accordance with normative legal provisions, ensuring flexibility for the public to choose between APHW and APHB based on individual needs. This approach aligns with the principles of good governance in public services, namely enhancing accessibility, transparency, and legal certainty for the community in managing inherited land rights.

From the results of this analysis, it can be concluded that the dominant factors preventing the Land Office from directly accepting APHW as the basis for registering the transfer of land rights due to inheritance include differences in regulatory interpretation, internal administrative policies, and concerns about future legal disputes. This policy results in longer procedures and higher costs for the public, potentially reducing efficiency in Indonesia's land registration system. The choice between APHW and APHB affects the administrative stages that applicants must complete. When using APHW, the applicant only needs to undergo one stage of registration, namely direct registration with the Land Office by submitting an APHW that has been agreed upon by all heirs. Conversely, when using APHB, the applicant must first change the ownership name to include all heirs before the joint rights can be divided through APHB.

This suggests that APHW is a more efficient option in terms of time and cost, as the applicant does not need to first complete the inheritance name transfer process. However, in practice, not all Land Offices provide this option, as evidenced in research by the Jember Regency Land Office. In many cases, the registration of inherited land

requires the initial transfer of ownership names to all heirs before rights can be distributed to specific individuals. This makes the process, which could be completed in one step through APHW, more complex and time-consuming. In the context of inheritance, the transfer of land rights is part of the maintenance of land registration data to reflect changes in ownership from the deceased to the heirs. Failure to register inherited land promptly can lead to legal uncertainty and potential disputes in the future. For example, in a case in Semarang City, the registration of the transfer of rights to one of the heirs based on a notarial or private Deed of Inheritance Division was not accepted as a direct basis for transferring land rights. The Land Office required that the transfer first be registered in the name of all heirs before the land could be divided through APHB. The inconsistency of such policies results in additional administrative costs and extends the time required for heirs to obtain legal certainty over inherited land (Sholihah, 2021). However, even though based on the Regulation of the Government of the Republic of Indonesia No. 24 (1997), the transfer of rights should be registerable directly in the name of the heir receiving the rights through APHW. In practice, this administrative barrier reflects a gap between legal certainty in theory and its practical implementation in land registration. This highlights the need for policy standardisation across all Land Offices, along with broader public awareness efforts, to ensure that the APHW mechanism can be implemented effectively without unnecessary procedures. Therefore, ownership changes resulting from inheritance must be registered promptly at the Land Office to ensure that land certificates accurately reflect ownership status.

The policy of the Jember Regency Land Office in the registration of transfers of inherited land rights. The registration of land rights transferred due to inheritance is part of land

registration data management, aimed at ensuring the legal validity of land ownership after the owner's death. This research found that the Jember Regency Land Office implements an administrative policy prioritising the initial process of changing the name of the inheritance before the inherited land can be distributed to specific heirs. The transfer to the heirs occurs as a legal consequence of the owner's death, resulting in the inheritance passing to the heirs. Through Balik Nama Waris, the transfer of land rights from the deceased to all heirs renders the land jointly owned. Subsequently, the division is re-registered using a deed issued by a PPAT, namely APHB.

Based on this explanation, it can be concluded that the registration process for the transfer of land rights due to inheritance to a specific heir at the Jember Regency Land Office comprises two steps. First, the name of the inheritance is changed to include all heirs, a process commonly referred to as "descending inheritance" (legal events). Second, the jointly owned land is divided or allocated

as individual ownership through APHB, with the agreement of all joint right holders (legal actions). In the registration process for the transfer of land rights due to inheritance, two key stages are required. First, a legal event occurs where inherited land automatically transfers ownership to all heirs through the inheritance name change process, thereby establishing joint ownership. Second, a legal action follows, in which the registered joint owners distribute ownership through an APHB. This process facilitates the inheritance of land by one or several heirs based on the agreement reached.

The Jember Regency Land Office favours this two-stage process on the basis that the collective name transfer mechanism enhances legal security and mitigates potential future disputes. In practice, inherited land registration at the Jember Regency Land Office adheres to the provisions outlined in Article 111, Paragraph (1), Section C of PMNA No. 16 (2021), which stipulates the documents that can be used as proof of heirship, such as outlined in Table 2.

Table 2. Requirements for registration of transfer of rights on inherited land

Type of requirement	Required documents
Proof of heirship	1. A will from the testator. 2. A court decision establishing inheritance rights. 3. A ruling by a judge or court chairman. 4. A statement from the heirs (for native Indonesian citizens), witnessed by two individuals and certified by the village head and sub-district head. 5. A certificate of inheritance rights from a notary (specifically for Indonesian citizens of Chinese descent). 6. A certificate of inheritance from the Balai Harta Peninggalan (specifically for Indonesian citizens of other Eastern foreign descent).
Administrative documents	1. A completed and signed inheritance transfer form. 2. A power of attorney (if the registration is conducted through a representative). 3. The original certificate of inherited land. 4. A valid certificate of inheritance. 5. A certified copy of the deceased's death certificate. 6. A photocopy of the National Identity Card (KTP) and Family Card (KK) of all heirs. 7. A photocopy of the Tax Notification Letter (SPPT PBB). 8. A proof of the payment of Fees for Acquisition of Rights on Land and Buildings (BPHTB).

Source: developed by the authors based on Article 111, Paragraph (1), Section C of PMNA No. 16 (2021)

These documents must be checked and verified by officials at the Land Office before the registration can be processed. If any documents are incomplete or do not meet the requirements, the application will be rejected, and the applicant must first provide the missing documents. Once the documents have been verified and confirmed as complete, the applicant is required to pay a land transfer registration fee, which varies depending on the size of the land being registered. The larger the inherited land, the higher the registration fee. After payment has been made, the Land Office will record the transfer of land rights and issue new certificates in the names of all heirs. This certificate will then be handed over to the applicant as proof of joint ownership. If the heirs wish to divide the land into separate ownership, they must apply to the PPAT for an APHB.

According to an interview with the Head of the Arrangement and Empowerment Section of the ATR/BPN Jember Regency Land Office, the system implemented by the Land Office is intended to avoid disputes in the future, as the transfer of names to all heirs ensures legal certainty that the inherited land is indeed owned by the rightful heirs. The policy implemented by the Land Office has both advantages and disadvantages that require further analysis. Among the advantages, this policy reduces the potential for inheritance disputes by ensuring that land rights are registered in the names of all heirs before distribution. Furthermore, this policy enhances legal security for all heirs by ensuring that land ownership status is officially recorded. However, this policy also has certain drawbacks. The registration process takes longer, as the heirs must go through two administrative stages, while the associated costs are higher due to taxes and administrative fees payable twice – once during ownership transfer and again when dividing the rights. Additionally, this policy lacks flexibility for heirs who wish to immediately use the Deed of Distribution of

Inheritance Assets (APHW) to register rights under the name of a single heir without first having to go through the name transfer process.

In contrast, at the Malang City Land Office, applicants are permitted to use APHW without the need to first conduct a collective name change. This demonstrates an inconsistency in how regulations are applied across different regions, potentially creating legal uncertainty for individuals handling inherited land registration. From this analysis, it can be concluded that the Jember Regency Land Office enforces a stricter policy for the registration of inherited land by requiring that ownership be transferred to all heirs before the land can be divided under APHB. While this policy aims to prevent inheritance disputes, it reduces efficiency in land registration services, as applicants must go through two lengthier and costlier stages. As a recommendation, the Jember Regency Land Office should accommodate the use of APHW as an alternative for heirs who prefer to register the inherited land directly under the name of a single beneficiary. This would reduce administrative costs, speed up the registration process, and provide greater flexibility for the community in managing inherited land rights.

Role of the PPAT in the registration of the transfer of land rights by inheritance. In the registration of the transfer of land rights due to inheritance, the PPAT plays a key role in drafting the APHB, which serves as the legal instrument for dividing the inherited land among heirs in accordance with their agreement. Article 51, Paragraph (1) of Regulation of the Government of the Republic of Indonesia No. 24 (1997) stipulates that the APHB constitutes authentic evidence proving the agreement of joint right holders to divide inherited land into individual ownership. In practice, heirs wishing to divide joint ownership must visit the PPAT with the necessary documents, such as the applicant's identity documents, the testator's death certificate, the land certificate,

a statement letter from the heirs, and proof of payment of related taxes (Kaawoan *et al.*, 2024).

Once the documents have been verified as complete, the PPAT drafts an APHB, which heirs can then use as a legal basis for registering the transfer of land rights at the Land Office. However, for this registration, the applicant must submit not only the APHB but also other required administrative documents, including a completed inheritance name transfer form, a power of attorney (if applicable), and proof of payment of BPHTB fees and income tax (PPH). Although existing regulations permit the use of an APHW to directly transfer rights to a single heir, the Jember Regency Land Office does not provide this option in practice. Instead, the applicant must complete a two-stage process, first transferring ownership to all heirs and then executing the division of rights through the APHB.

An interview with the Head of the Arrangement and Empowerment Section of the ATR/BPN Jember Regency Land Office revealed that this policy is based on the principle of prudence to avoid potential disputes in the future. Additionally, there is an agreement between the Jember Regency Land Office and the local PPAT/PPATs requiring the transfer of ownership to all heirs before proceeding with the division. This approach was adopted due to the frequent issues arising from the division of inherited land, such as conflicts between heirs, disputed land partitioning, and the misuse of inherited land by certain heirs. Thus, transferring ownership to all heirs first is considered a preventive measure that provides legal certainty before the land is further divided:

Conceptually, this approach aligns with the precautionary principle in land administration, which seeks to prevent potential disputes and ensure that each decision is legally sound. It also reinforces the notion that applying this principle in land registration helps reduce the risk of ownership disputes and provides legal protection for

all parties involved (Putri Saleh, 2023). However, while this method aims to provide stronger legal protection, its implementation requires two administrative stages in the registration of inherited land, making the process more time-consuming and costly for communities. Therefore, it is necessary to evaluate this policy to enhance its flexibility by considering the option of registering land using an APHW for heirs who have agreed to transfer rights to a single beneficiary without first undergoing a collective title transfer.

In registering the transfer of land rights due to inheritance, the Jember Regency Land Office adheres to the principle of prudence by requiring the transfer to be completed in two stages. This step aims to reduce inheritance disputes that often arise due to differences in the heirs' understanding of the division of inherited land. In practice, the Jember Regency Land Office has coordinated with PPATs and Temporary PPATs in its jurisdiction so that this policy is implemented uniformly in all inherited land registrations. As an official authorised to draft land deeds, the PPAT plays a key role in preparing the APHB, which serves as the legal basis for registering the transfer of land rights at the Land Office. The PPAT is responsible for carrying out part of the land registration process by drafting deeds that serve as evidence of certain legal actions regarding land rights. In the case of inheritance, an APHB is required when the inherited land is jointly owned and the heirs wish to divide it into individual ownership. With an APHB prepared by a PPAT, land that was originally recorded as jointly owned can be legally divided into individual ownership (Lutfiah *et al.*, 2024).

In addition to PPATs, Temporary PPATs also play an important role in land registration, especially in remote areas where there is no permanent PPAT. Temporary PPATs can be appointed by sub-district officials or village heads per Article 5, Paragraph (3) of Regulation of the Government of the Republic of Indonesia No. 37 (1998),

to facilitate public access to legal land deeds (Mahfufah, 2015). The sub-district head or village head who acts as a Temporary PPAT has the same authority as a PPAT in drafting land deeds. Through cooperation between the Land Office, PPATs, and Temporary PPATs, land registration services can be extended to all levels of society, including remote areas.

In practice, PPATs and Temporary PPATs also have a duty to provide legal guidance to the community regarding the procedures for and legal implications of the division of inherited land (Suryaningsih *et al.*, 2015). The agreement between the Land Office and PPATs in Jember ensures that all applicants follow the two-stage title transfer process to prevent future disputes. Through this coordination, PPATs not only act as deed drafters but also serve as intermediaries between the community and the Land Office, ensuring that policies are more easily understood and followed by the public.

Implications of public interest on the implementation of registration of land rights transfer registration to inheritance without using the Deed of Distribution of Heirlooms.

In the process of registering the transfer of land rights due to inheritance, the public is given two options based on the applicable regulations: the APHB or the APHW. These documents have different functions and purposes. The APHB is used if the inherited land has already been registered under all heirs, while the APHW allows a direct transfer to one heir without first requiring a name change (Article 42, Paragraphs (4) and (5)) (Regulation of the Government of the Republic of Indonesia No. 24, 1997); Article 111, Paragraph (4) and (5) PMNA, No. 16 (2021). In practice, the Jember District Land Office only applies one mechanism: through the transfer of the inheritance name must occur before the division of inherited land using an APHB. This approach has been adopted as a precautionary measure to prevent future disputes.

The decision of the Jember Regency Land Office to exclusively facilitate registration with an APHB differs from the policy applied by the Malang City Land Office. According to this study, the Malang City Land Office accepts applications for the transfer of rights using both the APHW and the APHB. Under existing regulations, the two mechanisms have different legal consequences. Individuals who wish to transfer inherited land directly to one heir must still go through the name transfer process first, even though there exists a simpler option via the APHW. In fact, according to current provisions, the APHW, as an authentic deed made by a notary, can be used as a valid legal basis to directly register the transfer of rights to the agreed heirs (Eshafia *et al.*, 2024).

Therefore, the Land Office need to provide options that align with established regulations. Standardising the inheritance land registration mechanism without considering the legal consequences and public needs is not an effective approach, as both the APHB and the APHW have different roles and legal implications (Rahmi & Sudjito, 2020). Harmonising policy implementation across all Land Offices is necessary so that individuals can choose the procedure that best suits their circumstances and the agreement among the heirs. Thus, administrative decisions not only reflect the principle of prudence but also uphold the public's right to access more effective and efficient land services.

In the registration of the transfer of land rights due to inheritance, the use of an APHB incurs the BPHTB tax twice. This is due to the two-step process that must be followed: first, transferring the name of the inheritance to all heirs, and second, dividing joint rights using an APHB. The initial BPHTB tax, set at a minimum rate, is imposed on 300,000,000 IDR, which represents the non-taxable acquisition value limit (NPOP KP) for inheritance. The subsequent BPHTB tax is calculated at a minimum of 60,000,000 IDR when the division of

joint rights takes place. This makes the administrative process more complex, time-consuming, and financially burdensome for those applying for inheritance land registration (McCarthy *et al.*, 2022).

BPHTB is a tax levied on the acquisition of rights to land and/or buildings, applying not only to sale-and-purchase transactions but also to the transfer of rights due to inheritance. The acquisition of land rights through inheritance is still subject to BPHTB, with the NPOPTKP set at a minimum of 300,000,000 IDR, while the tax amount is determined based on the market value of the land and local regulations. This tax must be paid before the transfer of land rights can be registered at the Land Office. Once the process of transferring the name of the inheritance is completed, if the heirs wish to allocate the land to one beneficiary using an APHB, BPHTB will be applied again. The requirement to pay BPHTB twice presents a major obstacle for those who seek to register the transfer of inherited land using an APHB.

As a more efficient alternative, the public can choose to use the APHW to avoid both the lengthy administrative process and the double tax burden. With an APHW, the transfer can be made directly to a single heir without first requiring the inheritance name change for all heirs, resulting in only one BPHTB payment, which is set at a minimum of 300,000,000 IDR. In addition, the BPHTB tax payment in transfers conducted through an APHW is solely the responsibility of the beneficiary's heirs rather than all heirs, thereby reducing the financial burden compared to the APHB process (Danghamsyah & Tanaya, 2025). Registration via an APHW is simpler and faster because it requires only one stage – directly transferring ownership from the testator to the designated heir, as agreed upon by all other heirs.

Although the APHW process is administratively and financially more beneficial for the public, not all families are able to use this mechanism. Each family faces unique circumstances regarding

inheritance, including the number of heirs, property distribution, and mutual agreements among the heirs. Therefore, despite offering a more efficient solution, there are certain situations in which an APHB remains necessary, particularly when the inherited land has already been transferred to all heirs prior to division. A more flexible approach to the registration of inherited land transfers would offer greater benefits to the public while ensuring legal compliance and streamlining administrative procedures at the Land Office.

The division of inheritance varies among families, with each adopting a different approach. In some families, inheritance is regarded as joint property and is not immediately divided; instead, heirs may choose to transfer the names of all heirs without making an immediate allocation. Conversely, some families postpone the division for years after completing the inheritance name change, resulting in the use of an APHB for the transfer of land rights. Meanwhile, families that take a more transparent approach to inheritance management may opt for an APHW from the outset. Therefore, the registration of land rights transfers due to inheritance cannot be standardised, as inheritance mechanisms differ according to each family's circumstances and interpretations.

This variation in the methods available for transferring inherited land should be facilitated by the Land Office by providing registration options in accordance with the relevant laws and regulations. If only one registration method is facilitated, as seen in the Jember Regency Land Office, which exclusively directs applicants to register using an APHB, then the public loses the ability to choose the method best suited to their circumstances (Rahmi & Sudjito, 2020). This restriction has the potential to hinder individuals in completing their land administration processes, particularly since the APHB registration procedure is lengthier, more complex and incurs higher costs due to the imposition of double taxation.

From a good governance perspective, public services must be based on the principles of effectiveness, efficiency, and ease of access for citizens. If individuals are compelled to undergo a more time-consuming and costly process using an APHB, then the services provided do not reflect the principles of easy, cheap and fast administration. On the other hand, the use of an APHW as an alternative allows individuals to complete the land rights transfer registration in a single step, avoid double taxation, and expedite the issuance of certificates.

As such, the Land Office should recognise and accommodate the registration of inherited land transfers using both APHW and APHB. If only one method is enforced, such as mandating APHB, the public is denied a flexible choice aligned with their needs. The regulation offering two options is intended to simplify the land registration process for applicants. Therefore, the Land Office must fulfil its role inclusively and adaptively to ensure that land registration serves not as a burden but as a mechanism for enhancing legal certainty and accessibility.

From the perspective of the utilitarian theory proposed by Jeremy Bentham, a policy should aim to maximise the greatest happiness for the largest number of people (Choy, 2018). If the policy enforced by the Jember Regency Land Office limits applications for the transfer of inherited land rights to only APHB, this may be argued to reflect the principle of expediency. However, an ideal policy would grant individuals the freedom to choose between APHB and APHW without coercion, enabling them to select the procedure most suitable to their family's circumstances. The Land Office's policy of requiring applicants to use APHB is intended to prevent potential inheritance disputes in the future. However, this policy merits reassessment to determine whether it truly offers greater benefits to the public than a policy facilitating both APHB and APHW

simultaneously. The APHB process involves two administrative stages – first, the transfer of the inheritance name to all heirs, followed by the division of rights via APHB – which increases both time and financial costs. By contrast, inheritance distribution through APHW requires one administrative stage and only a single tax payment, making it the more efficient option.

Regarding procedures and costs, the use of an APHB requires heirs to pay BPHTB twice – first at the inheritance name transfer stage and again at the division of joint rights stage. This undoubtedly places a financial burden on applicants. Conversely, registration via APHW incurs only one tax payment, rendering it both administratively simpler and more cost-effective. Thus, if the Land Office only exclusively permits transfers via APHB, its services fail to align with the principles of good governance, particularly in terms of effectiveness, efficiency, and public accessibility (Anggara *et al.*, 2022).

Based on research findings, each method for registering inherited land transfers serves distinct functions and purposes. An APHB is applied if the heirs intend to divide land that has already become the joint property of all heirs, while an APHW facilitates the direct transfer of inheritance rights to a single heir without first requiring a name change for all heirs. Therefore, these two procedures are not interchangeable. The Land Office should offer and offer both options to ensure individuals have the autonomy to select the procedure most suitable to the circumstances. This flexibility would facilitate a less burdensome and more efficient process for transferring inherited land.

Conclusions

This study identified legal and administrative inconsistencies in the process of registering inheritance-based land transfers at the Land Office. The results showed that the implementation of Government Regulation No. 24 of 1997 on Land Registration is inconsistently applied across

various Land Offices, particularly in Jember Regency, where priority is given to the Deed of Division of Joint Rights over the Deed of Division of Inherited Property. The findings suggested that the policy mandating heirs to complete a two-stage registration process – first transferring the names of all heirs, followed by the division of rights using an APHB – imposes unnecessary administrative and financial burdens on individuals. Such an approach contradicts the principles of good governance, which emphasise efficiency, affordability, and accessibility in public administration. In addition, the requirement for heirs to pay BPHTB twice when transferring inherited land via APHB significantly increases costs, making the process more complex and financially demanding.

From a legal standpoint, this practice introduces uncertainty in inheritance law, as the lack of uniform procedures across Land Offices results in policy variations between regions. By contrast, APHW presents a more efficient alternative by permitting the transfer of rights directly to a mutually agreed heir without requiring two administrative stages. Although legally permitted under Article 42 of Government Regulation No. 24 of 1997, APHW remains largely unsupported by some Land Offices, including in Jember Regency. Drawing on Jeremy Bentham's theory of benefit, which proposes that policies should maximise societal benefit to society, the Land Office's policy

of exclusively accepting APHB does not fully align with this principle. Conversely, if the Land Office provided applicants with the choice between APHB and APHW, individuals would be able to tailor the land rights transfer process to their specific family circumstances, thereby ensuring greater benefits for the wider community. Therefore, a standardised policy framework is required to ensure that both mechanisms remain accessible and adaptable to applicants' needs within the prevailing legal framework.

As a direction for further research, this study could expand its scope to examine the impact of more flexible policies on administrative efficiency and the reduction of financial burdens on applicants. Additionally, future research could compare the implementation of inheritance land registration policies across various Land Offices in Indonesia to assess the potential for more inclusive and adaptive regulatory approaches. Another possible avenue of exploration involves investigating how digital technology might streamline the land registration process while reducing legal uncertainties and financial burdens for heirs.

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None.

Conflict of Interest

None.

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Вплив публічного інтересу на здійснення земельним управлінням реєстрації переходу прав на землю в порядку спадкування

Нові Чінтя Курняваті

Аспірант

Університет Бравіджая

65145, 169 Jl. MT. Харьоно, м. Маланг, Індонезія

<https://orcid.org/0009-0003-2094-8552>

Ханіф Нур Відхіянті

Доктор юридичних наук

Університет Бравіджая

65145, 169 Jl. MT. Харьоно, м. Маланг, Індонезія

<https://orcid.org/0009-0003-6100-382X>

Патриція Одрі Русліянто

Доктор юридичних наук

Університет Бравіджая

65145, 169 Jl. MT. Харьоно, м. Маланг, Індонезія

<https://orcid.org/0009-0006-6621-832X>

Анотація

Реєстрація переходу прав на землю в порядку спадкування відіграє важливу роль у системі земельного права Індонезії. Постанова Уряду Республіки Індонезія № 24 «Про реєстрацію земельних ділянок» встановлює два механізми для цього процесу: акт про поділ спільних прав та акт про поділ спадкового майна. Це дослідження мало на меті проаналізувати фактори, які сприяли небажанню органів земельних ресурсів визнавати акт поділу спадкового майна як дійсний варіант реєстрації успадкованих земельних ділянок. Було застосовано соціально-правовий метод дослідження, який включав інтерв'ю з посадовими особами земельних відділів та аналіз відповідних юридичних документів. Виявлено, що на практиці положення не застосовувалися послідовно в усіх земельних управліннях, деякі з них визнавали дійсним реєстраційним документом лише акт про поділ спільних прав. Така непослідовність призводила до адміністративної неефективності та фінансового тягаря для населення, включаючи тривалі процедури та подвійне оподаткування через обов'язкову зміну прізвища перед поділом спадкових прав. Крім того, було досліджено вплив такої практики на адміністративну ефективність та правову визначеність для громади. Результати дослідження показали, що розбіжності в імплементації нормативно-правових актів у різних земельних управліннях призвели до процедурної неузгодженості в реєстрації успадкованої землі. Наприклад, районний земельний відділ міста Джембер з міркувань юридичної обачності надавав перевагу акту про розподіл спільних прав перед актом про розподіл спадкового майна, незважаючи на те, що

чинне законодавство допускає обидва механізми. Дослідження підтвердило, що реєстрація на підставі договору про розподіл спадкового майна є більш ефективною, оскільки вимагає лише одного адміністративного етапу та запобігає подвійному оподаткуванню. З точки зору теорії вигоди Джеремі Бентама, обмеження земельним управлінням варіантів реєстрації не повністю максимізувало суспільну вигоду. Для підвищення ефективності та правової визначеності в системі управління земельними ресурсами Індонезії необхідна гармонізація політики. Необхідно прийняти більш гнучкий підхід, щоб забезпечити громадянам свободу вибору механізму реєстрації спадкової землі, який найкраще відповідає їхнім потребам і обставинам

Ключові слова: реєстрація успадкованої землі; поділ спільних прав; поділ спадкового майна; обов'язок придбання землі та будівель; правова визначеність



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Development of the national production of personal protective equipment: Problems of control over state certification and working conditions during martial law

Oleg Makarevych*

Postgraduate Student

Private Institution Research Institute of Public Law

03035, 2A G. Kirpa Str., Kyiv, Ukraine

<https://orcid.org/0009-0009-8213-0450>

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Abstract

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The purpose of this study was to determine the effectiveness of the mechanisms of state control over the production of personal protective equipment under martial law and to develop recommendations for their improvement to improve product quality and employee safety. The methodological framework of this study was an expert survey, systemic and structural, formal legal, and comparative legal methods. The study conducted an expert survey of managers of 7 manufacturing companies via the online platform to assess certification issues and working conditions on a five-point scale. The analysis of the study findings revealed critical problems in the field of certification: excessive financial burden, complexity of certification procedures, protracted duration of the process, lack of transparency, and low availability of information on requirements. The study found that most companies must urgently organise shelters due to the lack of protective structures, have problems with logistics and raw material supplies, and less than half of the companies faced an outflow of skilled personnel abroad. The assessment of working conditions showed an elevated level of provision of

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*Corresponding author

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employees with protective equipment, but critically low readiness for evacuation. Additional security costs were found to account for an average of 15% of the companies' budgets, while labour productivity decreased by 20-30% due to frequent air raids. The study demonstrated the need to introduce simplified certification procedures for critical goods, reduce the cost of procedures through government subsidies, and create a single information portal with up-to-date information on requirements and changes in the regulatory framework. The study proposed the development of special methodological recommendations on the organisation of labour under martial law and the creation of state support mechanisms for the modernisation of production facilities and the construction of protective structures. The findings have practical implications for the development of an effective state policy in the field of personal protective equipment production in Ukraine and demonstrate the need to strike a balance between the efficiency of meeting defence needs and compliance with quality and safety standards under martial law

Keywords: product testing; cost-effectiveness; accredited laboratories; technical regulations; market surveillance; financial support

Introduction

The martial law in Ukraine and active hostilities have created an unprecedented demand for personal protective equipment (PPE) for the military and civilians. This has resulted in the rapid development of domestic PPE production and the need to ensure proper control over its quality and safety. In the context of martial law, the issue of state certification of protective equipment and control over working conditions at manufacturing enterprises is of particular relevance, as the lives and health of military personnel and civilians directly depend on it. At the same time, accelerated production rates and challenging operating conditions of enterprises create further challenges for the quality control and certification system of PPE. The problem of ensuring proper control is particularly acute in the context of decentralised production and the emergence of new manufacturers, which requires improvement of existing mechanisms of state regulation and supervision.

An analysis of the scientific literature shows that researchers pay considerable attention to various aspects of the development of production

and quality control of personal protective equipment. Q. Hu *et al.* (2023) in their review of the evolution of personal protective systems noted that modern PPE has made substantial progress in providing comprehensive protection for military personnel. The researchers emphasised the significance of the development of intelligent protection systems, which have been greatly improved over the past two decades through the introduction of advanced technologies. At the same time, the researchers emphasised the need to address the problems of ergonomics and usability of the latest protection technologies. O. Strelko and A. Horban (2023) presented a thorough historical analysis of the development of body armour, tracing the evolution of research and industrial technologies. The researchers emphasised the significance of developing uniform standards for modern protective equipment and stress the need to factor in the historical experience when developing new certification systems. They also focused on the contribution of the first developers of bulletproof vests, whose experience continues to be relevant to modern manufacturers.

R.F. Mortlock (2022) made a valuable contribution to understanding the industrial aspects of PPE production by analysing the specifics of body armour production management. The researcher emphasised the need to balance limited resources with competing priorities and highlighted the role of interaction between commercial companies and governmental control bodies. S.G. Jones (2023) presented a critical analysis of the readiness of the defence industry to meet modern challenges, focusing on the problems of production capacity and the need to rapidly increase it in the face of potential conflicts. The researcher also emphasised the significance of modernising control and regulatory systems to ensure rapid response to market needs. A.K. Mishra *et al.* (2024) analysed the technical aspects of the production of protective equipment, focusing on the use of high-strength fibres and their influence on the effectiveness of protection. The researcher's findings demonstrated the value of an integrated approach to the design of protective systems and the need to consider all components in certification.

M.J. Klausner *et al.* (2021) conducted a significant study on the effectiveness of PPE in combat, analysing injury statistics and the use of protective equipment. His findings on the most vulnerable parts of the body and the level of use of various types of protection are crucial for the development of certification standards. I.G. Crouch (2019) and S. Siengchin (2023) focused on the prospects for the use of lightweight materials in PPE production. Their research demonstrated the significance of investing in the development of new materials and the need to adapt quality control systems to the latest technological solutions. M. El Messiry (2020) presented a comprehensive analysis of testing and certification methods for protective equipment, emphasising the importance of balancing protection and comfort. The researcher's study contains valuable recommendations for improving testing and quality control systems.

Special attention was paid to the potential of additive technologies in the production of PPE.

V. Bachynskyi *et al.* (2022) and H.A. Colorado *et al.* (2023) analysed the prospects for using 3D printing in the production of protective equipment. V. Bachynskyi *et al.* (2022) emphasised that the use of additive technologies can greatly reduce the weight of body armour by optimising the use of materials and opens opportunities for the production of protective equipment in the field. H.A. Colorado *et al.* (2023) complemented this study by addressing the need to develop new standards and certification procedures for 3D printed products. Both studies emphasised the significance of adapting control systems to the latest technological challenges and the need to revise the principles of designing protective equipment to factor in the capabilities of additive technologies. The analysis of scientific studies showed that researchers have paid considerable attention to the technological aspects of PPE production, development of new materials, and evaluation of their effectiveness, but the issues of adapting state control and certification systems to martial law conditions, specifically in the context of decentralised production and the need to rapidly scale up production capacity, are still understudied. Furthermore, mechanisms for ensuring proper working conditions at PPE manufacturing enterprises in the face of increased demand and limited resources require further study.

The purpose of the present study was to identify the legal and organisational problems of the functioning of the national production of personal protective equipment under martial law and to develop ways to solve them to improve the effectiveness of state control over product quality and working conditions. The objectives of the study were as follows:

1) to establish the specific features of legal regulation and organisation of the production of personal protective equipment in Ukraine under

martial law, to identify the main problems of the industry and factors affecting its development;

2) to establish the effectiveness of the current mechanism of state certification of personal protective equipment and identify the shortcomings of the system of control over compliance with product quality standards under martial law;

3) to characterise the state of legal support and practical implementation of requirements for working conditions at enterprises producing personal protective equipment and to develop proposals for their improvement.

Materials and Methods

The methodological framework of the study is a comprehensive system of general scientific and special methods of cognition. The basic theoretical approach was based on the concept of the rule of law and the theory of administrative and legal regulation of economic relations under special legal regimes. The study was based on the fundamental provisions of the theory of public administration regarding the mechanisms for regulating economic activity in crisis conditions, as well as on the conceptual foundations of the theory of labour safety in the context of ensuring sustainable development of industrial production (Sakovskyi & Bilozorov, 2022).

The study employed a set of interrelated methods of scientific cognition. The historical method helped to explore the development of legal regulation of the production of personal protective equipment as a dynamic process that underwent substantial transformations under martial law and to identify the main contradictions between regulatory requirements and the practice of their implementation. The system-structural method was used to analyse the mechanism of state certification of PPE as an integral system of interrelated elements, including legal regulation, institutional support, and procedural aspects. The formal legal method was

applied to a detailed analysis of the provisions of the regulations governing the production of PPE and the procedure for its certification, to identify gaps and conflicts in legal regulation. Using the comparative legal method, the study compared Ukrainian legislation, specifically the Technical Regulation on Personal Protective Equipment (Resolution of the Cabinet of Ministers of Ukraine No. 761, 2008), with Regulation of the European Parliament and of the Council No. 2016/425 "On Personal Protective Equipment" (2016) in the field of technical regulation of PPE, which helped to identify areas for further harmonisation of national legislation with EU law. Furthermore, the analytical materials of the National Institute for Strategic Studies on the development of PPE production (Sobkevych *et al.*, 2024) were used, which provided up-to-date information on the state of the industry. The key source of empirical data was the results of an expert survey.

The empirical part of the study was implemented through a comprehensive analysis of working conditions and certification procedures at PPE manufacturing enterprises. The study included three interrelated components. The sample consisted of 7 enterprises from different regions of Ukraine: 2 small (up to 50 employees), 3 medium-sized (50 to 250 employees) and 2 large (over 250 employees) enterprises according to the criteria set out in Article 2 of the Law of Ukraine No. 996-XIV "On Accounting and Financial Reporting in Ukraine" (1999). Geographically, the companies are located in Kyiv (2 companies), Lviv (2 companies), Kharkiv (1 company), Dnipro (1 company), and Odesa (1 company) regions. The first component of the study consisted of an analysis of internal company documents, including permits, occupational health and safety regulations, job descriptions, orders, training and briefing materials, workplace certification documents, medical examinations, and accident records. The second component included a structured survey

and structured interviews with business managers to collect factual data on organisational changes implemented under martial law.

The study was conducted following ethical standards. All participants were informed about the purpose of the study and provided written consent to take part. The anonymity and confidentiality of the data obtained were guaranteed and used only in a generalised form. Personal data was protected following the Law of Ukraine No. 2297-VI "On Personal Data Protection" (2010). The employee survey was conducted via a secure Google Forms platform, with the average time to complete the questionnaire being 10-15 minutes.

The questionnaire for employees consisted of three parts: introductory (general information

about the respondent), assessment of certification issues, and analysis of working conditions. The respondents rated the parameters of the certification procedure on a five-point scale, including its complexity, duration, transparency of the process and financial burden. The latter included official costs according to the established tariffs: payment for the services of certification bodies (UAH 15,000-25,000), the cost of laboratory tests (UAH 20,000-40,000), and the cost of preparing technical documentation and product samples. The results of the assessment are presented in Table 1. Structured interviews with managers focused on collecting factual information on organisational changes, new security procedures, and logistical challenges under martial law.

Table 1. Five-point scale for assessing certification procedures

Parameter	Score	Content
Complexity and duration of the certification procedure	5	The procedure takes more than 6 months and requires submission of more than 15 different documents
	4	The procedure lasts 4-6 months
	3	The procedure lasts 2-4 months
	2	The average duration of certification is 1-2 months
	1	The average duration of new product certification is up to 1 month
Transparency of the certification process	5	Complete lack of information about the evaluation process and criteria
	4	Information is provided with delays and is incomplete
	3	Information is provided on time but is incomplete and contradictory
	2	Authorities provide information on time, but it is not sufficiently complete
	1	Certification bodies provide full information on the process and evaluation criteria on time
Financial burden	5	Total costs do not exceed 15,000 UAH
	4	Total costs are 15,000-30,000 UAH
	3	Total costs are 30,000-50,000 UAH
	2	Total costs are 50,000-70,000 UAH
	1	Total costs exceed 70,000 UAH
Availability of information on certification requirements	5	Information on procedures is not publicly available
	4	Access to information is severely limited and requires complex bureaucratic procedures
	3	Information is available only through official requests
	2	Procedures are available, but information about them is not sufficiently systematic.
	1	Procedures are accessible, and information about them is sufficiently systematic.

Source: developed by the author of this study

The study was conducted in three successive stages. At the first stage, a systematic analysis of the legal framework and theoretical sources was conducted to determine the specifics of legal regulation of PPE production under martial law. The second stage included the development of tools, an expert survey, and data processing to identify practical problems in the field of certification and ensuring proper working conditions. At the third stage, based on a comprehensive analysis of regulatory sources and empirical data, scientifically based proposals for improving the legal regulation of the industry were formulated.

Results

Legal regulation and organisation of production of personal protective equipment in Ukraine under martial law. In the current environment, the issue of legal regulation of the production of personal protective equipment (PPE) in Ukraine is of particular relevance, based on a comprehensive system of regulations that includes both laws and subordinate legislation. The fundamental legislative act in this area is the Law of Ukraine No. 2694-XII "On Occupational Safety" (1992). Article 8 of this Law establishes the employer's obligation to provide employees with PPE following the established standards. PPE is defined as means intended to be worn or held by an employee for protection against harmful and dangerous factors of the working environment. The Law also makes the employer responsible for the quality and prompt issuance of PPE, which creates a legal basis for quality control of the production of such equipment.

A significant element of the regulatory system is the Technical Regulations on Personal Protective Equipment approved by Resolution of the Cabinet of Ministers of Ukraine No. 761 "On Approval of the Technical Regulations on Personal Protective Equipment" (2008). This regulation sets out the safety requirements for PPE and the

procedures for assessing their compliance. The specific feature of the document is that the regulation establishes three categories of PPE depending on the degree of risk to the user: category I – for protection against minimal risks, category II – for protection against medium risks, category III – for protection against risks that may lead to extremely serious consequences. This categorisation is of practical significance as it determines distinct levels of requirements for conformity assessment procedures. For instance, for category III PPE, certification by notified bodies is mandatory, which ensures an increased level of quality control. Notably, the Technical Regulation was developed considering the Regulation of the European Parliament and of the Council No. 2016/425 "On Personal Protective Equipment" (2016). This ensures the harmonisation of Ukrainian requirements with European standards and simplifies the procedures for exporting Ukrainian products to the EU. Undoubtedly, such harmonisation of the regulatory framework facilitates Ukraine's integration into the European market and increases the competitiveness of Ukrainian producers.

The system of national standards, namely DSTU EN 13921:2017 "Personal Protective Equipment. Ergonomic Principles" (2017), which sets out critical requirements for the ergonomics of protective equipment, plays a significant role in the quality assurance of PPE. The practical significance of this standard has especially increased in the context of military operations, when the comfort of using PPE directly affects the combat capability of military personnel when worn for prolonged periods. The general legal framework for the technical regulation system is formed by the Law of Ukraine No. 124-VIII "On Technical Regulations and Conformity Assessment" (2015), which defines clear procedures for the development of technical regulations and requirements for certification bodies. The implementation of these regulatory requirements allows ensuring

an adequate level of quality control at all stages of production and certification.

Of particular note is the fact that after the introduction of martial law according to the Decree of the President of Ukraine No. 64/2022 (2022), Resolution of the Cabinet of Ministers of Ukraine No. 234 “On the Specifics of the Application of Technical Regulations and Conformity Assessment under Martial Law” (2022) was adopted. This resolution substantially simplified the PPE certification procedures, allowing the products to be placed on the market based on the manufacturer’s declaration of conformity without a full cycle of testing. Control tests within a certain time period were still mandatory. This approach enabled a rapid increase in the production of the required products, but created potential risks in terms of product quality, which could have negative consequences for PPE users.

An analysis of the structure of the PPE market in Ukraine showed substantial transformations in the industry after the outbreak of full-scale military operations. A considerable number of light industry companies have reoriented their production capacities to meet the needs of the defence sector, which has led to a dramatic change in the market structure and an increase in the number of PPE manufacturers. Admittedly, this transformation has created new challenges for the quality control system, as many companies had no previous experience in the production of specific types of PPE, including ballistic protection. In the context of the current situation, the main challenges for the industry are to ensure an adequate level of quality control under simplified certification procedures and to ensure that products meet the established standards. Notably, the absence of a full cycle of testing before products are released to the market can lead to the appearance of low-quality or dangerous PPE, which is contrary to the requirements of the Law of Ukraine No. 1023-XII “On Consumer Rights

Protection” (1991). It is vital to emphasise that the law guarantees consumers the right to product safety and makes manufacturers liable for damage caused by defective goods.

In the context of the functioning of PPE manufacturers, legal regulation of working conditions is of great significance. It was established that the intensification of production processes under martial law and the shortage of qualified personnel create prerequisites for potential violations of labour legislation. The regulatory framework for ensuring proper working conditions is provided by the provisions of the Code of Labour Laws of Ukraine (1996) and Law of Ukraine No. 2694-XII “On Occupational Safety” (1992), which establish mandatory requirements for safe working conditions and compliance with working time standards. The state policy of supporting the industry is implemented through the mechanisms stipulated by the Law of Ukraine No. 4618-VI “On Development and State Support of Small and Medium Enterprises in Ukraine” (2012), specifically through compensation of interest rates on loans for the purchase of equipment and partial reimbursement of the cost of new equipment. At the same time, according to an analytical report by the National Institute for Strategic Studies (Sobkevych *et al.*, 2024), existing state support measures do not ensure sufficient modernisation of production facilities to meet the growing demand from the defence sector and civilian population. This is conditioned by both the limited production capacity of enterprises and the logistical complications caused by the hostilities.

The legal regulation of PPE production in Ukraine needs to be further improved to ensure a balance between the efficiency of supply and product quality. In this context, it is necessary to strengthen post-certification control, introduce effective mechanisms of manufacturers’ liability for product quality, and ensure proper working conditions at enterprises. From a legal

standpoint, this can be achieved by amending the current legislation, specifically, the Law of Ukraine No. 389-VIII "On the Legal Regime of Martial Law" (2015), which will allow establishing special regulatory regimes for critical industries, including the production of PPE. Notably, a comprehensive approach to the legal regulation and organisation of PPE production under martial law is necessary to ensure the effective functioning of the industry, protect the rights of consumers and employees, and strengthen national security. It is particularly significant to understand that this involves not only improving the regulatory framework, but also active cooperation between the state and manufacturers aimed at solving the industry's current problems.

The mechanism of state certification of personal protective equipment and product quality control under martial law. The mechanism of state certification of PPE in Ukraine is based on a series of regulations, the principal of which is the Law of Ukraine No. 124-VIII (2015). This Law establishes general principles and requirements for the development, adoption, and application of technical regulations, as well as defines procedures for assessing the conformity of products with the established requirements. Technical regulations establish mandatory requirements for products or related processes or production methods, including requirements for terminology, symbols, packaging, marking, or labelling. The Technical Regulation on Personal Protective Equipment, approved by Resolution of the Cabinet of Ministers of Ukraine No. 761 (2008), which is harmonised with the relevant European standards, is in force for personal protective equipment. The procedure for state certification of PPE involves assessing the compliance of products with the established requirements by carrying out the relevant procedures specified in the technical regulations. The manufacturer is obliged to ensure that the necessary

tests are conducted, and technical documentation is drafted to confirm the conformity of the product. Conformity assessment bodies accredited following the Law of Ukraine No. 2407-III "On Accreditation of Conformity Assessment Bodies" (2001) conduct assessments and issue certificates of conformity. The accreditation of these bodies guarantees their competence and impartiality, which ensures confidence in the assessment results. Notably, accreditation is performed by the National Accreditation Agency of Ukraine (NAAU), which operates based on international standards and ensures mutual recognition of accreditation results at the international level.

PPE is tested in accredited testing laboratories to confirm that the products meet the requirements of DSTU, which are harmonised with international standards such as ISO or EN. For instance, DSTU EN 149:2017 "Personal Respiratory Protection Equipment Filtering Half Masks for Protection Against Aerosols. Requirements, Tests, Labelling" (2017). These standards define technical requirements for the design, materials, filtration efficiency, mechanical strength, and other characteristics of PPE. Testing allows ensuring that products meet the established requirements and ensure the safety of their use. The quality of PPE is monitored not only at the certification stage, but also throughout the entire product life cycle. Following the Law of Ukraine No. 2735-VI "On State Market Surveillance and Control of Non-Food Products" (2010), state market surveillance is performed to ensure that products meet the established requirements and protect consumers from dangerous products. The state market surveillance authorities, specifically the State Labour Service of Ukraine (SLSU) and the State Service of Ukraine for Food Safety and Consumer Protection (SSUFSCP), conduct inspections of business entities, take product samples for testing, take measures to withdraw unsafe products from circulation, and bring those responsible to justice.

Changes in the quality control procedures for PPE under martial law. To promptly meet the needs of defence and protection of the population, the government adopted Resolution of the Cabinet of Ministers of Ukraine No. 234 (2022). This regulation stipulates simplification of conformity assessment procedures by allowing the introduction of products into circulation based on a declaration of conformity without a full range of tests. Manufacturers can independently declare the conformity of products to the established requirements based on their technical documentation and internal quality control. However, such changes raise certain concerns regarding ensuring an adequate level of product safety and quality. Pursuant to Article 42 of the Constitution of Ukraine (1996), the state ensures the protection of consumer rights and control over the quality and safety of products. According to Article 3 of the Law of Ukraine No. 1023-XII "On Consumer Rights Protection" (1991), consumers are entitled to product safety and to receive necessary, accessible, reliable, and prompt information about products. Simplification of certification procedures may result in products that do not meet the established requirements and pose a threat to the life and health of consumers entering the market. This contradicts the basic principles of state policy in the field of consumer protection and may have negative consequences for society.

The analysis of a comprehensive study conducted at seven PPE manufacturing companies with the involvement of employees of various levels revealed systemic problems in the certification of personal protective equipment. The research methodology included both a survey of personnel and a detailed analysis of internal company documentation: permits, occupational health and safety regulations, job descriptions, orders, training and briefing materials, workplace certification documentation, medical examination materials, and accident records. According to the survey

and documentation analysis, the complexity of the certification procedure received an average score of 4.1 (29 points from seven respondents), which demonstrates that it is overly burdensome. The study showed that the procedure requires the submission and processing of more than 15 different documents, with technical requirements characterised by insufficient clarity of wording. The duration of the certification procedure also proved to be a critical issue, receiving an average score of 4.0 (28 points). An analysis of official documentation confirmed that the process can take four to six months, which, in the context of martial law and the urgent need for PPE, creates substantial obstacles to responding quickly to market needs. Delays occur both at the stage of reviewing documentation and during sample testing due to overloading of accredited laboratories.

The financial burden was the most critical parameter, receiving an average score of 4.4 (31 points). Analysis of financial documentation and survey results revealed that the total cost of certification for most companies does not exceed UAH 15,000, which suggests potential risks of insufficiently thorough product quality checks. The transparency of certification procedures received an average score of 3.7 points (26 points), suggesting substantial shortcomings in the information support of the process. Four out of seven surveyed companies noted that information is provided with a delay and is incomplete, which creates further obstacles to planning the certification process. The availability of information on certification requirements received an average score of 3.4 (24 points), which reflects some challenges in obtaining information, but is not a critical issue. An analysis of the regulatory framework for PPE certification in 2022-2024 showed three main waves of regulatory changes: in March 2022, Resolution of the Cabinet of Ministers of Ukraine No. 234 (2022) was adopted to simplify conformity assessment

procedures under martial law, in August 2023, changes were made to strengthen product quality control, and in January 2024, requirements for testing procedures were updated. Such changes were driven by the need to adapt procedures to martial law and to conform with the generally

accepted practice of regulatory updates in a crisis. To visualise the main problems of PPE certification under martial law, a diagram was created to illustrate the results of the expert survey on five key indicators that need to be addressed as a matter of priority (Fig. 1).

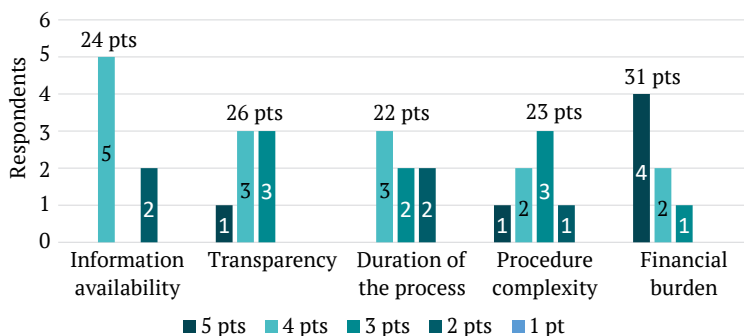


Figure 1. Distribution of assessments of PPE certification problems

Source: developed by the author of this study based on a survey of business executives

The analysis of the data obtained demonstrates systemic challenges in the field of certification of personal protective equipment under martial law, which require a differentiated approach to their solution. The most critical were the economic aspects of the certification procedure, which create a considerable burden on manufacturers and impede the development of the industry. This is primarily related to the need to pay for the services of certification bodies, laboratory testing, and preparation of technical documentation, which is especially noticeable for small and medium-sized enterprises in the context of limited financial resources in wartime. The complexity of procedures and administrative barriers form the next level of the problem, which suggests the need to optimise the regulatory framework and simplify the mechanisms of interaction between producers and certification bodies. Particular attention should be paid to the issue of the duration of procedures and their transparency, where there is a more even distribution of respondents'

assessments, indicating both positive experience and systemic shortcomings in these aspects. The issue of information accessibility, although rated relatively lower, still poses a major challenge that requires improved information and communication mechanisms and a greater level of advisory support for producers. The identified structure of problems and their gradation by the level of criticality creates the basis to develop comprehensive measures to improve the certification system, considering both the immediate needs of the industry and opportunities for its long-term development.

Based on the empirical research, the respondents formulated a set of proposals to improve the certification procedure, including simplification and acceleration of procedures, reduction of financial burden, increased transparency and accessibility of information, and stabilisation of the regulatory framework. Particular attention was paid to the need to introduce electronic systems for submitting and reviewing documents as a mechanism to reduce bureaucratic burden and expedite

processes. Furthermore, it was suggested to introduce a system of privileges or state support for Ukrainian PPE manufacturers, which is of strategic significance for the development of national production and supplying the internal market with quality products. The legal analysis of the study findings helped to draw a series of vital conclusions regarding the compliance of the existing state certification system for PPE with the fundamental principles of commercial law and constitutional guarantees. Although the system formally follows international standards, its practical implementation creates excessive regulatory barriers for manufacturers, which contradicts the principles of state policy in the field of entrepreneurship stipulated in Article 6 of the Commercial Code of Ukraine (2003), specifically, the creation of favourable conditions for business development. Furthermore, the identified problems can be regarded as a de facto restriction of the constitutional right to entrepreneurship guaranteed by Article 42 of the Constitution of Ukraine (1996). This discrepancy is particularly acute in the context of martial law, when there is an urgent need to optimise control mechanisms and adapt them to new reality.

Considering the findings of the empirical study and their legal assessment, it is recommended to implement a set of measures to improve the mechanism of state certification and quality control of PPE. Firstly, it is necessary to develop and implement simplified certification procedures for critical goods under martial law, which should be based on an analysis of international experience and best practices. Secondly, an essential area is to reduce the cost of certification procedures through state subsidies or preferential tariffs for Ukrainian producers, which will help develop national production. Thirdly, it is necessary to increase the transparency of the processes by creating a single information portal with up-to-date information on requirements, procedures, and changes in the regulatory

framework. Particular attention should be paid to optimising the regulatory framework by systemising regulations, eliminating duplications and contradictions, and minimising the frequency of changes in requirements, which will create a stable legal environment for planning production activities and investments. An essential element of the certification system reform is the introduction of a unified digital platform for submitting and reviewing documents. Implementation requires the development of specialised software with personal accounts for manufacturers, an integrated document management system, and a module for tracking the status of applications. The platform should enable the submission of documents using a qualified electronic signature, automated completeness checks, and online communication with certification bodies. Implementation of the system also requires amendments to the Technical Regulation on Personal Protective Equipment, the creation of a secure IT infrastructure, and staff training. It is equally significant to ensure that the staff of conformity assessment and market surveillance bodies have the adequate level of qualifications, and that they are provided with the necessary resources and tools to effectively perform their control functions.

Legal support and practical implementation of requirements for working conditions at enterprises producing personal protective equipment. Legal support for working conditions at personal protective equipment enterprises and its practical implementation are of particular significance under martial law, since the effective functioning of such enterprises directly affects national security and health of citizens. The regulatory framework for the regulation of working conditions is formed by a set of acts of varying legal force. The basic document is the Code of Labour Laws of Ukraine (1996), which in Article 153 enshrines the employer's obligation to ensure safe and harmless working conditions

that meet the level of technological development of production, while Article 161 establishes a mandatory requirement for briefings, training, and testing of knowledge on occupational safety and health. These provisions are detailed in the Law of Ukraine "On Occupational Safety" (1992), Article 13 of which specifies the employer's obligations to create suitable working conditions and take preventive measures. The Law of Ukraine No. 389-VIII "On the Legal Regime of Martial Law" (2015) is of particular relevance in the current environment, as Article 8 stipulates the possibility of introducing labour service and curfews, which substantially affects the organisation of production processes.

Based on a review of internal documentation and a survey of employees, an analysis of working conditions at PPE manufacturing companies revealed substantial discrepancies between regulatory requirements and their practical implementation. The issue of sheltering and evacuation of employees is particularly critical, as evidenced by the absence or non-compliance of emergency localisation and response plans with the

requirements of Article 20 of the Law of Ukraine "On Occupational Safety" (1992). A parallel study of organisational changes conducted through structured interviews with company executives (Table 2) revealed key measures implemented in response to the challenges of martial law. All the companies surveyed introduced extra security protocols and briefings. Six companies had to urgently organise shelters, which required extensive financial investments. Air raids significantly affect production processes, leading to a 20–30% reduction in productivity and the need to evacuate employees. 5 companies faced problems with logistics, raw material supplies, and increased security costs. Less acute but significant issues were the psychological state of employees and communication with government agencies (4 companies), as well as the outflow of skilled personnel and the need for technical re-equipment (3 companies). For a deeper understanding of the transformation of working conditions under martial law, a detailed analysis of changes in labour organisation was conducted, the findings of which are summarised in Table 2.

Table 2. Changes in labour organisation under martial law

Parameter	Number of enterprises (out of 7)	Comments
Need to organise shelters	6	Lack of equipped shelters; plan to equip within 3-6 months; need financial support
Continuity of production	5	Introduced shift work; moved part of the production to safer regions
Compliance with the working hours	6	The schedule was adapted to the curfew; challenges with organising night shifts
Employee safety	7	Additional briefings were held; additional PPE was purchased; emergency protocols were implemented
Problems with logistics and supply	5	Delays in the supply of raw materials; increased transport costs; instability of suppliers
Impact of air raid alarms on work	6	Frequent work stoppages; 20–30% reduction in productivity; need to evacuate employees
Psychological state of employees	4	Increased anxiety; psychological support organised; increased number of sick leaves
Outflow of qualified personnel	3	Migration of employees abroad or to safe regions; challenges in recruiting new specialists
Increased security costs	5	Additional security costs amounted to an average of 15% of the budget; need for investment in security technology

Table 2. Continued

Parameter	Number of enterprises (out of 7)	Comments
Communication with government agencies	4	Insufficient information support; complications with obtaining permits and consultations
Changes in legislation and regulations	5	Frequent changes in requirements; challenges in tracking new regulations; need for legal aid
Financial hardship and access to credit	4	Limited access to finance; lack of preferential loans; delays in payments from customers
Technical re-equipment and modernisation	3	Need to upgrade equipment; limited investment opportunities; dependence on imported components

Source: systematised by the author of this study according to the results of the answers of the executives of the enterprises to open questions

The table above describes a multi-level system of changes in labour organisation at PPE manufacturing companies that arose as a result of the introduction of martial law. The data analysis allows tracing a clear hierarchy of challenges – from critical personnel safety issues to long-term problems of enterprise development. It is worth noting the interconnectedness between various aspects of labour organisation: for instance, problems with the organisation of shelters and compliance with working hours directly affect productivity and economic efficiency. Special attention should be paid to the identified correlation between the financial capabilities of enterprises and their ability to ensure proper working conditions, which indicates the need for state support for the industry. The significance of the data presented is that they form an empirical basis for the development of concrete legal mechanisms to support enterprises and improve the labour protection system under martial law.

Based on the empirical study and the legal analysis of its results, there are systemic problems in ensuring proper working conditions at PPE enterprises under martial law. The identified problems indicate imperfect mechanisms for implementing labour law provisions and the need to adapt them to modern challenges. Specifically, the insufficient effectiveness of state control and the lack of clear instructions on how to organise

labour under martial law pose a risk of violating the constitutional right to proper, safe, and healthy working conditions guaranteed by Article 43 of the Constitution of Ukraine (1996).

To address the identified problems, a set of legal and organisational measures should be taken. Firstly, the legal framework for organising labour under martial law needs to be improved. It would be advisable to develop a special regulation – Methodological Recommendations on Labour Organisation at Critical Infrastructure Enterprises under Martial Law, which would account for the specifics of PPE production and contain clear instructions on ensuring the safety of employees. Secondly, it is necessary to strengthen state support for enterprises by amending Law of Ukraine No. 1116-IX “On State Support of Investment Projects with Significant Investments in Ukraine” (2020), making provision for separate mechanisms to support critical infrastructure enterprises to modernise production facilities and create relevant protective structures. Thirdly, it is vital to improve the system of state supervision over compliance with labour legislation by expanding the powers of the State Labour Service of Ukraine and ensuring its effective interaction with enterprises to provide methodological support. Specifically, there is a need to implement international standards in the field of labour protection, namely the recommendations of the International

Labour Organization on ensuring labour safety in emergencies. This involves not only improving national legislation but also developing practical mechanisms for its implementation through the creation of a system of training and experience exchange, the introduction of regular monitoring of working conditions and the development of emergency response plans. Implementation of the proposed measures will help to increase the level of protection of employees, ensure the sustainable operation of PPE production enterprises and, as a result, strengthen Ukraine's national security under martial law.

Discussion

The results of the study on the development of national production of personal protective equipment under martial law demonstrated systemic problems in the industry and confirmed the findings of other researchers on the critical significance of ensuring an adequate level of quality control and working conditions. The problems with PPE certification and ensuring proper working conditions identified in the study correlate with the findings of T. Guest (2024) on the need to adhere to the highest standards of testing and use of suitable materials in the production of protective equipment. This is especially relevant in the context of real combat threats faced by military personnel on the front line, particularly when using modern sniper systems and high-precision weapons. The identified problem of the lack of effectiveness of simplified certification procedures was confirmed by O.O. Chelobitchenko *et al.* (2022), who emphasised the need for full ballistics tests before certification of protective equipment. Therewith, empirical studies revealed that under martial law, an urgent need for accelerated certification arises to meet the operational needs of defence, which requires the development of exceptional quality control mechanisms under time constraints and increased demand for protective equipment.

A comprehensive analysis of working conditions at PPE manufacturing companies reveals systemic problems with employee safety. According to research by Z. Kozak *et al.* (2019), the issue of legal regulation of occupational safety and health in Ukraine is becoming more relevant under martial law, specifically, the legislative approach to the adoption of new laws should be in line with international legal standards. A. Cherep *et al.* (2023) determined the influence of the innovative potential of personnel on strengthening the economic security of Ukrainian enterprises in the post-war period, emphasising the significance of considering innovative competencies when developing programmes for the country's recovery. Particular attention was drawn to the identified problems with the organisation of shelters and evacuation of employees, which correlated with the findings of T. Arkhireyskaya *et al.* (2024) on the need to consider the transformation of threats and risks. The researchers emphasised the changing nature of emergencies, the growth of anthropogenic factors of technogenic and natural disasters, including cyberattacks, infectious pandemics, and terrorism. Based on the analysis of regulatory mechanisms, it was concluded that the legislative and law enforcement components of disaster management should factor in the transformation of their nature and stipulate strategic planning, considering the latest aspects of environmental safety, threat dynamics, and international environmental co-operation. At the same time, the findings of the study are consistent with the position of S. Zhelekhovskiy (2024), who emphasised the need to mobilise national industry and adapt civilian production to the needs of the defence sector, which in martial law requires special attention to ensuring the safety of production personnel and creating an adequate protection infrastructure. The analysis of statistical data showed that enterprises that implemented comprehensive

employee protection systems demonstrate greater labour productivity and product quality.

The findings of the study on the need to modernise production facilities correlate with the results of V.V. Sakovets and A.A. Revutskyi (2022), who substantiated the significance of introducing the latest technologies to improve the performance of protective equipment, specifically through the use of modern composite materials and innovative production technologies. Therewith, the identified problem of limited financial resources of enterprises was confirmed by E. Sheludko and M. Zavgorodnia (2022), who stressed the need for state support for high-tech industries to maintain industrial potential. The results of the study on the need to adapt protective equipment to the specific needs of users correlate with the findings of Y. Korol and Y. Lisnichenko (2022) on the significance of addressing the modern threats when developing PPE, especially in the context of protection against new types of weapons and threats. At the same time, the identified problem of insufficient standardisation was confirmed by the findings of V.V. Melkin (2022), who pointed out the lack of clear definitions of basic concepts in the field of protective equipment and the need to harmonise national standards with international requirements, which is especially significant for ensuring the export of Ukrainian products.

A particularly relevant aspect of the study is the identified problem of quality control under simplified certification procedures, which is consistent with the findings of A. Loishyn *et al.* (2022) on the need to create a comprehensive system for monitoring and controlling international assistance in the field of protective equipment. V. Chorna *et al.* (2022) also emphasised the role of ensuring that protective equipment follows international standards, specifically NATO standards, which was confirmed by the findings of the conducted study. In this context, the practices of other countries is valuable;

F. Zeng *et al.* (2019) noted that an essential aspect of the industry's development is not only technological innovation, but also ensuring the environmental friendliness of the production and disposal of protective equipment. This issue is of particular relevance in the context of European integration processes and the need for Ukrainian production to meet European environmental standards. The survey results also revealed the need to establish specialised PPE testing and certification centres, which would ensure an adequate level of product quality control even under simplified certification procedures. The identified problems with working conditions were reflected in the studies of S. Abikenova and G. Daumova (2023), who emphasised the need to factor in all harmful production factors when providing employees with protective equipment, as well as O. Fesenko *et al.* (2019), who highlighted the significance of following the regulatory requirements for providing employees with PPE and monitoring their use.

The findings of the study on the need to improve the system of state support for the industry are consistent with the findings of N. Khanyk *et al.* (2022) on the significance of international support to overcome the negative effects of war and ensure the continuity of supply of critical protective equipment. A prominent aspect is also the issue of disposal and recycling of used PPE, which was covered by N. Kathula *et al.* (2023), who proposed innovative approaches to solving this problem through the introduction of modern technologies for the processing and reuse of materials. E. Lagazzi *et al.* (2024) emphasised the value of ensuring adequate conditions for medical procedures in the field, which also requires suitable personal protective equipment and the development of specialised kits for medical staff.

Overall, the study not only confirmed the conclusions of Ukrainian and foreign researchers on the need for a systematic approach to solving the

problems of the PPE industry under martial law but also expanded the understanding of the specific challenges faced by Ukrainian manufacturers. The identified problems and proposed solutions create the basis for a comprehensive strategy for the development of the industry, which includes improving the regulatory framework, strengthening state control, ensuring adequate funding, and expanding international cooperation. The obtained findings are of practical value for the development of state policy in the field of personal protective equipment production and can be used in the formulation of programmes for the development of the industry in the post-war period. The identified trends suggest the need to create an integrated quality management system covering the entire product life cycle, from development to disposal. Another crucial aspect is the development of international cooperation in the development and implementation of new PPE production technologies, which will enable Ukrainian manufacturers to integrate into global supply chains and ensure the competitiveness of their products on the world market. Further research should be directed at developing concrete mechanisms for implementing the proposed changes, assessing their economic efficiency and social impact, and exploring the possibilities of introducing innovative technologies for the production and quality control of personal protective equipment. Particular attention should be paid to the issues of standardisation and certification of products according to international requirements, which is critical for ensuring the export potential of the industry and its further development in the context of European integration processes.

Conclusions

The study comprehensively covered the current state of legal regulation and organisation of the production of personal protective equipment in Ukraine under martial law, focusing on the

problems of state certification and ensuring proper working conditions. A systematic analysis of the regulatory framework and empirical data helped to identify the key problems of the industry and propose ways to solve them. A prominent aspect of the study was to determine the impact of simplified certification procedures on product quality and labour safety, as well as to assess the effectiveness of state control in the context of military challenges.

The study analysed the specific features of the legal regulation of PPE production, including the changes made after the introduction of martial law, and their effects on the industry. The study found that the simplification of certification procedures, while contributing to the rapid increase in production, created potential risks to product quality and user safety. An empirical study conducted by interviewing managers of PPE manufacturing enterprises revealed systemic problems in the field of certification, including excessive financial burden and complexity of procedures, which create substantial barriers to the development of the industry. The analysis of working conditions at the enterprises demonstrated critical problems with ensuring the safety of employees in the face of military threats, especially regarding the organisation of shelters and evacuation, which must be urgently addressed through government support mechanisms and improvement of the regulatory framework. The study also revealed the need to modernise production facilities and introduce modern quality control technologies to ensure the competitiveness of Ukrainian products in the international market.

The findings are of great theoretical and practical value for understanding the transformation of the PPE industry under martial law and for developing an effective state policy in this area. They demonstrate the need to find a balance between the efficiency of meeting defence needs and compliance with quality and safety standards, as well as the significance of

state support for manufacturers to modernise production and create adequate working conditions. The conceptualisation of the findings suggests the need for a systematic approach to improving the mechanisms of state regulation of the industry, which should include both optimisation of certification procedures and development of instruments of state support for producers. Of particular significance is the identified interdependence between product quality, labour conditions, and economic efficiency of enterprises, which necessitates a comprehensive approach to solving the identified problems.

Limitations of the study included the lack of complete statistical information on the production and sales of PPE under martial law, the impossibility of conducting a survey at all enterprises in the industry due to security restrictions,

and limited access to information on international practices in regulating the production of PPE in emergency situations. Promising areas for further research include the study of international practices in regulating the production of PPE in emergencies, analysis of the possibilities for introducing innovative quality control technologies, development of public-private partnership mechanisms in the field of modernising production facilities, and research into the effects of digitalisation on the efficiency of certification and quality control procedures.

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Conflict of Interest

None.

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Розвиток національного виробництва засобів індивідуального захисту: проблеми контролю за державною сертифікацією та умовами праці під час воєнного стану

Олег Макаревич

Аспірант

Приватна установа Науково-дослідний інститут публічного права

03035, вул. Г. Кірпи, 2А, м. Київ, Україна

<https://orcid.org/0009-0009-8213-0450>

Анотація

Метою дослідження було визначення ефективності механізмів державного контролю за виробництвом засобів індивідуального захисту в умовах воєнного стану та розробка рекомендації щодо їх удосконалення для підвищення якості продукції та безпеки працівників. Методологічну основу дослідження склали експертне опитування, системно-структурний, формально-юридичний та порівняльно-правовий методи. Поза тим, було проведено експертне опитування керівників 7 підприємств-виробників через онлайн-платформу для оцінки проблем сертифікації та умов праці за п'ятибальною шкалою. Аналіз результатів дослідження виявив критичні проблеми у сфері сертифікації: надмірне фінансове навантаження, складність процедур сертифікації, тривалість процесу, недостатня прозорість та низька доступність інформації про вимоги. Встановлено, що більшість підприємств потребують термінової організації укриттів через відсутність захисних споруд, мають проблеми з логістикою та постачанням сировини, менше половини підприємств зіштовхнулися з відтоком кваліфікованих кадрів за кордон. Оцінка умов праці показала високий рівень забезпеченості працівників захисними засобами, але критично низьку готовність до евакуації. Виявлено, що додаткові витрати на безпеку склали в середньому 15% від бюджету підприємств, а продуктивність праці знизилась на 20-30% через часті повітряні тривоги. Дослідження продемонструвало необхідність впровадження спрощених процедур сертифікації для критично важливих товарів, зниження вартості процедур через механізми державного субсидування, створення єдиного інформаційного порталу з актуальною інформацією про вимоги та зміни в нормативній базі. Запропоновано розробку спеціальних методичних рекомендацій щодо організації праці в умовах воєнного стану та створення механізмів державної підтримки для модернізації виробничих потужностей і облаштування захисних споруд. Отримані результати мають практичне значення для формування ефективної державної політики у сфері виробництва засобів індивідуального захисту в Україні та демонструють необхідність пошуку балансу між оперативністю забезпечення потреб оборони та дотриманням стандартів якості й безпеки в умовах воєнного стану

Ключові слова: випробування продукції; економічна ефективність; акредитовані лабораторії; технічні регламенти; ринковий нагляд; фінансове забезпечення



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Alternative consumer protection methods in the context of civil law recodification

Inna Horislavska*

PhD in Law, Associate Professor

National University of Life and Environmental Sciences of Ukraine

03041, 15 Heroiv Oborony Str., Kyiv, Ukraine

<https://orcid.org/0000-0002-1865-9132>

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Abstract

Modern challenges require innovative approaches to understanding law and its individual institutions. A person with their rights and interests requires special legal 'attention' in matters of their protection, including consumer protection. The purpose of this study was to define the legal and research-to-practice foundations of alternative methods of consumer protection (mediation) and to investigate the international practices of using mediation in resolving disputes involving consumers. The study employed the methods of hermeneutics, modelling, forecasting, comparative legal, and formal legal methods. The study identified modern national and international approaches to understanding such categories as "protection of civil rights and interests", "protection of consumer rights", and "alternative ways of protecting civil rights and interests". The study outlined the scientific and regulatory positions in the use of mediation for consumer protection. The study analysed international practices of consumer dispute resolution which are alternative to court procedures as well as the possibilities of effective application of such practices after the entry into force of new provisions of national consumer protection legislation. Innovations of consumer protection legislation in Ukraine were covered, along with the prospects for their operation in the

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*Corresponding author

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post-war period, and the ways of integrating mediation into the judicial system. The study examined the European Union legislation governing the issues of alternative dispute resolution involving consumers. The court practice of applying the procedure for suspension of proceedings in cases involving the transfer of a dispute to mediation was covered. The materials presented and the findings of this study will be useful for representatives of public authorities and local self-government bodies

Keywords: protection of civil rights and interests; reconsideration of civil legislation; alternative ways of civil rights and interests' protection; dispute resolution; mediation

Introduction

The epistemology of the issues related to the protection of civil rights and human interests is mediated by the category of subjective civil law and protection of such rights, which largely depend on the state of civil law doctrine, certain forms and areas of understanding of law, and the conceptual foundations of the right to protection as an indispensable component of the exercise of subjective human rights. In modern conditions, the exercise of subjective rights and their protection, and, above all, the form of their exercise, is becoming increasingly relevant. A significant factor indicating the proper level of exercise of civil rights and interests by a person is the possibility of using judicial and extrajudicial (alternative) forms of protection. Since 2019, when the process of recodification of civil legislation was launched, approaches to the limits of subjective civil rights and methods of their protection have been clarified, specifically those not expressly stipulated by law or treaty (Resolution of the Cabinet of Ministers of Ukraine No. 650, 2019), which is crucial for further European integration (Hnativ *et al.*, 2023). Mediation stands out among the relevant methods. For a society in the context of full-scale armed aggression and limited access to the judicial system, alternative ways of protecting consumer rights are a vital component of the legal regulation mechanism.

The contributions of Ukrainian and foreign researchers on the forms and methods of

protection of civil rights and interests, including alternative ones, including mediation as one of the most effective methods of non-jurisdictional forms of protection, are characterised by their thoroughness. M.M. Velykanova (2024) studied the issue of updating civil legislation in the context of the introduction of European standards, including updating the principles of civil liability. The researcher reflected on the issue of correlation between risk and civil liability and proposed to expand the range of ways to ensure the performance of civil obligations. Namely, to stipulate other legal consequences along with incentives and liability measures.

N.S. Kuznetsova (2019) noted that “the institution of legal liability (including the institution of civil liability) has always been not only a powerful means of protecting subjective rights, but also a certain “indicator” of the effectiveness of the impact of law on social relations”. The researcher supported the consideration of European standards in the field of civil rights protection, specifically the judicial practice of the European Court of Human Rights. The researcher suggested adapting civil legislation to the *acquis communautaire* (Kuznetsova, 2021).

Investigating the issue of the correlation between the protection of rights and civil liability, O.O. Kot (2019) concluded that the idea of introducing a “functional-purpose criterion for distinguishing between liability measures and other

measures to protect subjective civil rights, considering that the purpose of liability is not to punish the offender” is viable. In addition, O.O. Kot (2024) analysed the conditions for the exercise of subjective civil rights and emphasised that the exercise of the relevant rights through free expression of will and at one’s own discretion requires the participant to be aware of the goal and ways to achieve it. However, the researcher did not specify the concrete ways of exercising subjective civil rights. Exploring the non-jurisdictional ways of protecting civil rights and interests, O.P. Rudnytska (2022) made the following conclusion: “the use of alternative (non-jurisdictional) methods of resolving civil law disputes is determined by the objective needs and interests of society”; among such alternative methods, the most common are arbitration, mediation, and self-defence of civil rights. The researcher called alternative dispute resolution an effective mechanism to protect civil rights and one of the ways to relieve the judicial system. Still, the question persists as to how these methods of civil rights protection relate to each other. O. Kostyuchenko *et al.* (2022) investigated mediation as a form of civil rights protection and found that “legal opportunities of mediation can be used by legal entities and individuals as a form of protection of subjective civil rights”. The researchers proposed changes to the legal status of a mediator depending on the categories of cases in which they would take part. This proposal is controversial, as it is not consistent with the basic principles of mediation.

M.V. Plotnikova *et al.* (2023) studied out-of-court ways to protect consumer rights in the financial services sector using the EU practices and found that “an essential feature of the EU financial services consumer protection system is out-of-court mechanisms that enable consumers to receive relevant advice, file a complaint that would be considered by an independent entity, and do so directly or remotely”. Despite the detailed study,

the researchers did not draw any conclusions on the possibility of implementing the corresponding practices in Ukrainian legislation.

O.O. Karmaza (2024) examined mediation as an extrajudicial form of protection of citizens’ rights under martial law and identified the positive aspects of this procedure – “optimisation of the judicial process and ‘unloading’ of judges; reduction of the number of appeals and cassation appeals filed; prevention of public hearing of the case in the course of mediation; extraterritoriality of the conflict (dispute), absence of jurisdictional restrictions”, and negative aspects – “mediation is not a panacea, it may not be effective for certain categories of conflicts (disputes)”. P.M. Gómez and I.A. Tremolosa (2024) found that “conflict mediation has been proposed as an alternative and/or complementary voluntary process to the judicial system, and depending on its use, it can prevent, resolve, or limit many conflicts”. In this regard, there is a need to further elaborate on the mechanism of parallel coexistence of these two processes. N. Ye and Z. Zhao (2024) studied the reform of consumer protection of mobile payment services in China at the legislative level and ways to resolve relevant disputes. Based on the findings of the study, the researchers concluded that banking legislation needs to be amended to better protect consumer rights.

The purpose of the study was to investigate the theoretical legal basis for the use of alternative methods of consumer protection in the context of recodification of civil legislation of Ukraine, using international practices in resolving disputes involving consumers.

Materials and Methods

The sources used in this study mainly included the provisions of Ukrainian legislation, specifically the Civil Code of Ukraine (2003), the Civil Procedural Code of Ukraine (2004), the Law of Ukraine “On Mediation” (2021), the Law of Ukraine

“On Protection of Consumer Rights” (2023), the Law of Ukraine “On Citizens’ Appeals” (1996), the Law of Ukraine “On Electronic Commerce” (2015), the Law of Ukraine “On Payment Services” (2021). The study was also based on international regulations, such as Directive of the European Parliament and of the Council No. 2008/52/EC “On Certain Aspects of Mediation in Civil and Commercial Matters” (2008), United Nations Convention on International Settlement Agreements Resulting from Mediation (2019), Directive of the European Parliament and of the Council No. 2013/11 EU “On Alternative Dispute Resolution for Consumer Disputes and Amending Regulation (EC) No. 2006/2004 and Directive 2009/22/EC (Directive on Consumer ADR)” (2013) and Regulation of the European Parliament and of the Council No. 524/2013 “On Online Dispute Resolution for Consumer Disputes (2013), SCC Arbitration Institute (2023) “Rules for Express Dispute Assessment”.

When exploring the legal categories and definitions to understand civil law and consumer protection, the study employed the methods of analysis and generalisation. The synthesis method was further used to formulate the conclusions of the present study. The national legislative acts and international regulations governing consumer protection procedures, including alternative methods, were analysed using the formal legal method. A comprehensive analysis of alternative methods of consumer protection in Ukraine was carried out. Accordingly, using this method, the study identified the substantive component of the regulatory framework mandating the use of alternative methods (mediation) of consumer protection. The formal legal method was useful for identifying inconsistencies in national consumer protection legislation. The comparative legal method was chosen to compare the relevant scientific positions and sources of law, which were crucial for achieving the purpose of the present

study, and to clarify the content of regulations on consumer protection. The hermeneutic method was employed to analyse the concept of civil law protection, its forms and methods, and alternative ways of consumer protection. The same method was used to establish the role and significance of mediation in consumer protection as an alternative way of protecting civil rights and interests. The methods of praxeology, prognostication and modelling helped to outline the prospects for the use of alternative methods of consumer protection (mediation) in various areas (e-commerce, financial services, etc.).

Results

The nature of civil remedies and alternative remedies in modern legal doctrine. The legal foundation for the application of methods of protection of civil rights and interests is established at the level of the Civil Code of Ukraine (2003). Under the current conditions in Ukraine, the right to not only judicial protection, but also an out-of-court (alternative) form of protection is of significant relevance. The philosophy of law based on the principle of human centrism suggests that the principal function of law is to protect subjective civil rights and interests of a person – a consumer. T.V. Bodnar (2020) analysed various legal positions on the right to defence and concluded that “the right to defence in the general theory of law and in the science of civil law is considered by most researchers as one of the powers that is part of subjective law”. While there are enough established positions on the term ‘civil law protection of rights and interests’ (Kuznetsova, 2019; Velykanova, 2024; Kot, 2024), there is no unambiguity in the definition of ‘alternative dispute resolution’. T. Shynkar (2017) defined alternative dispute resolution as ‘the termination of legal conflicts (disputes) without issuing an act based on the results of consideration of the case on the merits in a judicial or administrative procedure,

which consists in reaching a mutually acceptable or mutually beneficial agreement by the parties to resolve existing differences or making a binding arbitral award, usually based on the voluntary will of the parties and according to the rules independently established by the parties or applied by their consent". A. Sharaya (2022), studying the issue of alternative dispute resolution methods, concluded that "the key feature of these methods is the settlement of a dispute by reaching a compromise between the parties with the involvement of an intermediary".

Researchers have also focused on the criteria for classifying such alternative remedies, for example, M. Bilak *et al.* (2019) defined it as "the grouping of individual remedies into groups based on certain common features that are essential when deciding whether to apply a particular method of alternative dispute resolution to achieve a concrete legal purpose in resolving a legal dispute. The classification is conducted by identifying certain shared features, properties that allow combining the objects of research into separate groups, i.e., this refers to classification criteria that are quite diverse". The types of alternative remedies identified by researchers include negotiation, mediation, and arbitration, as well as their subtypes, with mediation standing out for its versatility. In the United States, the Institute of Legal Information uses the following wording to define alternative dispute resolution: "the definition refers to any method of dispute resolution without litigation".

Analysing the theoretical and practical aspects of alternative dispute resolution, Y.O. Fidrya (2024) proposed to distinguish three types of dispute resolution. The researcher included negotiations, mediation, and arbitration as basic; conciliation, independent expert opinions, ombudsman institutions, dispute resolution involving a judge and others as derivative; and hybrid methods as a combination of mediation and

derivative methods. N.O. Petrenko (2022) studied the distinction between such terms as "conciliation procedures", "pre-trial dispute resolution", and "alternative dispute resolution" and concluded that the national legal doctrine does not have clear criteria for their distinction. Based on the practices of European countries, specifically Italy, the researcher pointed out that conciliation procedures and pre-trial dispute resolution are ways (types) of alternative dispute resolution.

According to Article 1 of the Law of Ukraine No. 1875-IX (2021), mediation is "an out-of-court voluntary, confidential, structured procedure where the parties, through the mediator(s), try to prevent the occurrence of a conflict (dispute) or resolve it through negotiations". To improve access to justice, the European Parliament recommends establishing a framework for alternative dispute resolution. They believe that mediation is a cost-effective and efficient way to resolve civil and commercial disputes (Directive of the European Parliament and of the Council No. 2008/52/EC, 2008). According to O. Okudan and M. Çevikbaş (2022) and B.V. Derevyanko *et al.* (2023), the choice of a particular alternative remedy depends on the type of dispute. According to P. Raman *et al.* (2022), "alternative dispute resolution (ADR) procedures will generally become more widespread and formalised". E. Linares-Bernabéu (2023) conducted a thorough study and established the role of questions in discussing epistemic positions in the context of diffuse mediation that occurs in informal situations (family conflicts, conflicts between relatives, partners) and concluded that mediation helps constructive initiatives to restore relations between parties with polarised positions.

Thus, consumer protection is a prominent element of the overall system of civil legal protection, which exceeds the scope of civil legislation alone. It includes various legal mechanisms and instruments aimed at ensuring fairness and

balance of interests between consumers and suppliers of goods, works, and services. Apart from conventional court procedures, alternative dispute resolution methods play a key role in this system. They enable a compromise between the parties, filling the gap between state justice and informal conflict resolution. These approaches facilitate fast, flexible, and less costly dispute resolution, ensuring effective consumer protection.

Legal developments in the field of consumer protection. Consumer protection is one of the crucial types of protection of civil rights and interests, it is a distinctive feature of the rule of law and is aimed at ensuring that all consumer rights are respected when purchasing goods, works, and services. It is worth agreeing with the opinion of L.D. Meniv and A.A. Dinyuk (2024) that “the theoretical basis of this concept is based on a set of principles and legal mechanisms established at both international and national levels to ensure consumer safety, access to quality goods and services, and the ability to protect one’s rights in case of violation”.

Since the introduction of martial law in Ukraine, the Ukrainian Parliament Commissioner for Human Rights has received 2,580 (including 1,744 in 2022 and 836 in 2023) reports from citizens about violations of their rights as consumers of goods and services by business entities. In 2023, most of these complaints came from pensioners and family members of military personnel and concerned the provision of housing and communal services and financial/banking services under martial law (Annual reports of the Commissioner..., 2022; 2023). This situation is caused by the fact that for the period of martial law, the procedure for consumers to appeal in case of violation of their rights is carried out following the Law of Ukraine No. 393/96-BP “On Citizens’ Appeals” (1996), which stipulates consideration of such appeals without verification of compliance with consumer protection

legislation. However, since March 2022, the government has stipulated, according to L.D. Meniv and A.A. Dinyuk (2024), “in the presence of a threat that negatively affects the rights, legitimate interests, human life and health, environmental protection, and security of the state, as well as to perform Ukraine’s international obligations during the period of martial law, to allow unscheduled measures of state supervision (control) based on decisions of central executive authorities that ensure the formation of state policy in the relevant areas, including consumer protection”.

According to Item 18, Part 1, Article 16 of the Law of Ukraine No. 3153-IX “On Protection of Consumer Rights” (2023), among the principles of consumer protection, it establishes the priority of consumer rights and interests over any other interests and goals of business entities. Among the innovations, the Law includes a section on the specifics of consumer protection in case of agreements outside the commercial or office premises or remote agreements and prescribes the inclusion in such agreements of information on the possibility of applying the out-of-court dispute resolution mechanisms to which the business entity has joined, as well as the ways in which the consumer can apply to the out-of-court dispute resolution body. Such provisions of the Law of Ukraine No. 3153-IX (2023) should be effective in exercising the rights of consumers entering into electronic contracts following the Law of Ukraine No. 675-VIII “On Electronic Commerce” (2015), payment service agreements according to Articles 30 and 31 of the Law of Ukraine No. 1591-IX (2021) in terms of consumer protection, including the provision of information before entering into a payment service agreement. The Law of Ukraine No. 3153-IX (2023) introduced a new term for national legislation, the “e-buyer portal”, which “is created to ensure interaction between e-commerce entities, consumers, the competent authority and other state bodies that protect

consumer rights in the relevant areas within their competence". The portal's tasks include "enabling consumers to file complaints about violations of their rights when purchasing products from e-commerce entities, as well as sending commercial messages and informing them about the progress and results of consideration of complaints".

According to Article 40 of the Law of Ukraine No. 3153-IX (2023), the system of consumer protection includes out-of-court dispute resolution bodies and defines the procedure for out-of-court dispute resolution, the subject of consideration by the out-of-court dispute resolution body may include cases relating to products purchased for an amount not exceeding UAH 50 thousand; cases of violation of the procedure for warranty repair or replacement of products; cases of violation of the terms of delivery of goods purchased under contracts concluded outside the office or commercial premises. The decisions of such bodies will be binding on the business entity. While the issue of the functioning of an out-of-court dispute resolution body is a somewhat distant prospect (according to the Final Provisions, a relevant regulation must be adopted), the issue of "mechanisms for out-of-court dispute resolution" may be resolved through mediation. This was confirmed by the conclusion of the Committee on Ukraine's Integration into the European Union, namely, that the draft law on the subject of legal regulation complies with Ukraine's international legal obligations in the field of European integration and the scope of the European Union law (Directive of the European Parliament and of the Council No. 2013/11/EU, 2013).

Thus, the innovations of legal regulation in the field of consumer protection contain both positive changes and challenges related to their implementation. Despite the mechanisms for out-of-court dispute resolution and state control, their effectiveness will depend on their practical implementation and accessibility to consumers.

In the context of martial law, ensuring real protection of rights continues to be a challenging task that requires further legislative and organisational solutions.

International experience of using mediation in consumer disputes. The term "online dispute resolution" (ODR) emerged in the early 1990s as a form of "alternative dispute resolution" (ADR) driven by the spread of the World Wide Web (Kurkova & Shkarupa, 2024). This tool became widespread in the EU countries after the adoption of Directive of the European Parliament and of the Council No. 2008/52/EC "On Certain Aspects of Mediation in Civil and Commercial Matters" (2008) and Regulation of the European Parliament and of the Council No. 524/2013 "On Online Dispute Resolution for Consumer Disputes" (2013). Since 2016, the European Commission has launched an online platform for ODR between consumers and EU companies. With ODR, consumers can get a solution for free or for a small fee, while sellers can avoid legal costs and maintain good standing with customers (Izbash, 2022). In the United States, ODR operates through a platform where a mediator can be found, and if the desired result and understanding are not achieved, there is an opportunity to proceed to another alternative method of consumer protection – arbitration; USA&M is an ADR company that offers a qualified panel of mediators and arbitrators to clients from the legal, business, and insurance communities in the United States (United States Arbitration & Mediation..., 2025).

The Civil Mediation Council (2021) has considerable experience in using alternative dispute resolution involving consumers. For instance, if the value of a consumer's claim does not exceed £10,000, a confidential telephone mediation service offered by the Court Service can be used. A court fee is charged when filing any claim, but there is no separate fee for mediation. The activities of the Centre for Effective Dispute Resolution (2024)

in the field of consumer protection deserve special attention. The centre currently uses mediation procedures in 18 areas (from educational services, transport, medical, and even ceremonial services). The activities of the CEDR imply that it is the “body” that is proposed to be established in Ukraine in the future (“the body for out-of-court dispute resolution that determines the procedure for out-of-court dispute resolution”) (Law of Ukraine No. 3153-IX, 2023). For example, passengers of airlines or users of airports cooperating with CEDR can apply to this organisation. An independent arbitrator will review the evidence of both parties and issue a decision that the airline or airport must comply with within 20 business days, unless the arbitrator sets a different deadline (Centre for Effective Dispute..., 2025). An analogous scheme exists in the field of healthcare consumer protection (the Care Quality Commission (CQC) encourages all independent healthcare providers to offer an independent external review stage that can provide patients with a pathway to resolve a complaint if it is not resolved through the provider itself. The independent complaints pathway for private healthcare providers is the Independent Sector Complaints Advisory Service (ISCAS), which is housed at the CEDR and operates on a contractual basis with private healthcare providers (Centre for Effective Dispute..., 2025). Complaints to the Solicitors Regulation Authority (SRA) are also covered by the alternative consumer protection method; a sufficient range of alternative consumer dispute resolution services (including those involving CEDR arbitrators) has been developed in the construction sector.

The experience of alternative methods of protection of rights established in the Scandinavian countries, which was studied by A. Popova and A. Turgeneva (2021), can be used in consumer dispute resolution. The researchers found a fairly extensive scope of mediation procedures in these countries, namely: court mediation in civil

proceedings, which is based on a managed mediation procedure conducted by a judge without using the tactics and principles of mediation itself; commercial mediation is developed in Finland, with the Finnish Institute of the Chamber of Commerce as its centre. Having analysed the Rules for express dispute assessment of the SCC Arbitration Institute (2023), which stipulate the possibility for the parties to apply for an expert opinion on the advisability of choosing a certain alternative method of protecting their rights, it is advisable to introduce such a tool in Ukrainian legislation, primarily for business entities that provide services, goods, and works to consumers. This will help to reduce commercial and reputational risks and optimise time and financial costs. To protect the rights and interests of the Ukrainian consumer, the practices of France, as studied by M. S. Dolynska (2020), may be useful, as the costs of the mediation procedure are financed from the state budget, while it is free for the consumer.

In summary, the international practices of ODR demonstrate a variety of approaches to resolving consumer disputes, from online platforms to conventional methods of mediation and arbitration. The use of ODR enables consumers to effectively protect their rights, minimising costs and time, and helps to maintain positive relations between consumers and businesses. The introduction of such instruments in Ukraine could greatly improve consumer protection and contribute to the development of an effective dispute resolution system.

Discussion

The above position on the “integration” of consumer protection into the system of protection of civil rights and interests implies the existence of mechanisms for practical resolution of issues, specifically, through the judicial system. Researchers and practitioners have conducted a research-to-practice investigation of the issues

related to the “embedding” of mediation in the judicial system. Y. Prytyka and Y. Levina (2023), in their study of the principle of voluntariness of mediation, expressed the opinion that “absolutisation of the voluntariness of mediation in practice does not always lead to its desired promotion and reduction of the burden on the judicial system”. The EU Court of Justice, in the case of *Livio Menini and Maria Antonia Rampanelli v Banco Popolare – Società Cooperativa* (2017), found that “Directive 2013/11/EU should be interpreted as excluding national legislation, such as that at issue in the main proceedings, which stipulates that in the context of such mediation consumers must be assisted by a lawyer and that they may only withdraw from the mediation procedure if they demonstrate a valid reason to support such a decision”.

The policy document prepared by T. Kyselova (2017) with conclusions on the gradual integration of mediation into the judicial system and the establishment of the significance of mediation for the protection of rights will be of great value, namely: “the task of integrating mediation into the judicial system is to enable citizens to choose the most suitable mechanism for resolving a particular dispute from a wide range of various mechanisms. This will motivate citizens and increase their personal responsibility for resolving their disputes”. The position of N. Mazarakis (2018), set out in her monograph, that “the use by the parties of a particular method of dispute resolution, such as mediation, does not deprive them of the right to apply to the state court”, is reasonable. The researcher’s opinion that “legal science and legislation recognise legitimate interests as independent objects of legal protection and defence, and alternative dispute resolution procedures aimed at reconciling interests are ultimately aimed at protecting the interests of the parties from their diminution, restriction, or violation, i.e., can also be considered as forms of defence” is also noteworthy.

It is also worth noting the position of O.P. Rudnytska (2022) that jurisdictional and non-jurisdictional forms of protection of civil rights and interests and their methods of implementation should “coexist as complementary to each other”, with the simultaneous understanding that non-judicial forms of conflict resolution serve to minimise complaints regarding the improper performance of its role by the judiciary. The opinion of I. Dzera (2022), who analysed the application of Article 16 of the Civil Code of Ukraine (2003) and Article 5 of the Civil Procedural Code of Ukraine (2004) regarding the possibility of using ‘other’ ways of protecting civil rights and interests by the court, is significant in terms of the law enforcement system. O.O. Kot (2019) provided a thorough position on the understanding of the legal nature of civil remedies for the protection of rights and interests, specifically, on the correlation between the institution of civil liability and the institution of protection of rights. Noteworthy are the positions of M.V. Plotnikova *et al.* (2023) regarding the criteria for the effectiveness of the financial services consumer protection system, namely: “it depends on the level of ensuring the consumer’s ability to protect their rights, transparent and fair consideration of complaints and factual settlement of the dispute. The positions of P.M. Gómez and I.A. Tremolosa (2024) are those that can be used for consumer protection not only in the field of medical services, namely: “mediation allows the use of open discussion, peaceful dialogue, and negotiation to manage changes that occur in social, cultural, relational, and personal environments”. Civil cases from 01.01.2019 by contextual search “on approval of a settlement agreement” (Register of court decisions, n.d.) amounted to 49,855 as of 27 January 2025, including 29,896 after the adoption of the Law of Ukraine on Mediation No. 1875-IX (2021). There are grounds for an “encouraging” conclusion about the gradual spread and effectiveness of alternative

procedures for the protection of civil rights and interests and consumer protection in Ukraine.

Thus, there is a broad consensus on the need to integrate alternative dispute resolution methods into the consumer protection system. Researchers emphasise the significance of balancing the voluntariness and effectiveness of mediation, as well as the need for its gradual integration into the judicial system. They also emphasise that alternative methods do not replace judicial protection, but complement it, providing consumers with more opportunities to protect their rights. It is necessary to continue developing the legal framework and practical mechanisms to ensure that alternative methods of consumer protection are accessible and effective, thereby helping to relieve the burden on the judicial system and increase the level of protection of citizens' rights.

Conclusions

The current state of national legislation on consumer protection is characterised by a focus on European norms and practices, and at the same time, its "capabilities" are complicated by the martial law in our country. The mediation procedure is one of the most popular forms of legal conflict resolution in European countries, due to its nature as a social phenomenon of modernity, which combines legal, psychological, and sociological aspects. Mediation, unlike formal legal proceedings and the methods of protection of civil rights and interests provided for by them, involves a neutral facilitator (mediator) who "guards" the interests of the parties by developing an algorithm for communication between the parties, facilitating its constructiveness and identifying the possibility for the parties to independently find the best option for resolving a disputed (conflict) situation.

The present study established the legal nature of such terms as "civil law protection of rights and interests" and "consumer protection", and their interconnection, which is mediated by

the conclusion that consumer protection is part of a complex system of civil law protection of rights and interests which is not limited to the provisions of civil legislation. The study determined the role and place of alternative methods of protection of civil rights and interests. Accordingly, it can be assumed that alternative methods of consumer protection may "fill the niche" between state justice and informal dispute resolution between consumers of goods, works, and services and entities providing them based on consensus. This meets the current needs of Ukrainian society in the context of full-scale aggression and a crisis of confidence in the conventional judicial system. The spread of mediation reflects a general trend towards restorative, understanding-oriented practices.

The present study analysed the innovations of the national consumer protection legislation based on the best European practices, such as the referral of consumer disputes to out-of-court dispute resolution bodies. Although these innovations have been "put on hold" due to the martial law and the failure to bring all regulations into compliance with them, the prospect of their implementation for consumer protection is clear, considering the international practices and judgments of the European Union Court of Justice, and the analysis of national court practice showing that court rulings and decisions approving settlement agreements are widespread.

Admittedly, the issue of implementing mediation and other alternative ways of protecting civil rights and interests in the judicial system of Ukraine requires further research. This issue is intricately related to the balancing between observance of the principle of voluntary mediation and the need to reduce the burden on the judicial system through "compulsory" mediation mechanisms. A challenging and significant area for further research should be the search for the best mechanisms for introducing mediation as an

independent phenomenon into the consumer protection system, which will substantially bring Ukrainian legal system closer to European standards and ensure effective out-of-court resolution of consumer disputes and simplify access to justice.

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Conflict of Interest

None.

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Альтернативні способи захисту прав споживачі в умовах рекодифікації цивільного законодавства

Інна Горіславська

Кандидат юридичних наук, доцент

Національний університет біоресурсів і природокористування України

03041, вул. Героїв Оборони, 15, м. Київ, Україна

<https://orcid.org/0000-0002-1865-9132>

Анотація

Виклики сьогодення потребують нових підходів у розумінні права та його окремих інститутів. Людина з її правами та інтересами потребує особливої правової «уваги» у питаннях їх захисту, зокрема і у питаннях захисту прав споживачів. Метою статті було визначити правові та науково-практичні основи альтернативних способів захисту прав споживачів (медіації) та дослідити міжнародний досвід використання медіації у вирішенні спорів за участю споживачів. Для дослідження використано методи герменевтики, моделювання, прогнозування, порівняльно-правовий та формально-юридичний. Визначено сучасні національні та міжнародні підходи у розумінні категорій: «захист цивільних прав та інтересів», «захист прав споживачів» та «альтернативні способи захисту цивільних прав та інтересів». Окреслено наукові та нормативні позиції у застосуванні медіації для захисту прав споживачів. Проаналізовано міжнародні, альтернативні судовим практики у вирішенні спорів за участю споживачів та можливості їх ефективного застосування після вступу в силу нових положень національного законодавства про захист прав споживачів. Розкрито новели законодавства про захист прав споживачів в Україні, перспективи їх дії у післявоєнний період а способи інтеграції медіації у судову систему. Досліджено законодавство Європейського Союзу, що врегульовує питання альтернативного вирішення спорів за участю споживачів. Зроблено дослідження судової практики застосування процедури зупинення провадження у справах з передачею спору на медіацію. Представлені матеріали та результати дослідження будуть корисними для представникам органів державної влади та місцевого самоврядування

Ключові слова: захист цивільних прав та інтересів; переосмислення цивільного законодавства; альтернативні способи захисту цивільних прав та інтересів; вирішення спорів; медіація



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Destruction waste management: Legal regulation issues

Volodymyr Yermolenko

Doctor of Law Sciences, Professor
National University of Life and Environmental Sciences of Ukraine
03041, 15 Heroiv Oborony Str., Kyiv, Ukraine
<https://orcid.org/0000-0002-4295-4158>

Viktoriia Melnyk

PhD in Law, Associate Professor
Bila Tserkva National Agrarian University
09117, 8/1 Soborna Sq., Bila Tserkva, Ukraine
<https://orcid.org/0000-0002-1287-8799>

Tamara Novak*

PhD in Law, Associate Professor
National University of Life and Environmental Sciences of Ukraine
03041, 15 Heroiv Oborony Str., Kyiv, Ukraine
<https://orcid.org/0000-0003-2371-3014>

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Abstract

The study investigated the legal aspects of managing waste from the destruction of buildings and structures generated by military operations. The relevance of the study arises from the fact that destruction waste is a new category of waste for Ukraine, which appeared during a full-scale war. The relations on the management of destruction waste are also new. These relations require special legal regulation, the development of a set of regulations that would reflect both the characteristics of this waste and the specifics of its management operations, considering the current situation. The purpose of this study was to examine the state of legal regulation of

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*Corresponding author

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destruction waste management, to identify the principal shortcomings in this area, and to formulate conclusions and proposals which are new to legal science. This purpose was fulfilled using a set of methods of scientific cognition, namely, the dialectical method, the method of analysis, the formal logical method, the historical legal method, the formal legal method, and the method of synthesis. As a result, the study found that the legislation of Ukraine on waste management does not properly reflect the specifics of destruction waste management. To improve the state of legal regulation of this area, proposals were developed for a subordinate regulation consolidating the algorithm for calculating the amount of generated destruction waste, controlling its quantity at distinct stages of its management, and improving the procedure for managing destruction waste whose owner is not established. The study identified the shortcomings of planning for the management of destruction waste at the national, regional, and local levels, and developed proposals for reflecting destruction waste management measures in the relevant waste management plans. The findings obtained are of theoretical significance for legal science in terms of research on the problems of construction waste management, are of practical value in further reforming waste management legislation and can also be used in the work of authorised entities in organising construction waste management operations

Keywords: waste management; war-related destruction waste; regulatory framework; waste management operations; waste storage; landfills; waste dumps

Introduction

One of the negative consequences of the full-scale war ongoing in Ukraine is the problem of generation and accumulation of waste from the destruction of buildings, structures, and other facilities due to active hostilities and constant shelling of Ukrainian settlements ("destruction waste"). By the beginning of 2024, according to preliminary estimates, all buildings in Ukrainian cities such as Bakhmut and Marinka were destroyed; up to 90% of residential buildings in Sievierodonetsk were damaged; substantial damage was sustained in Mariupol, Kharkiv, Chernihiv, Lysychansk, Popasna, Volnovakha, and other settlements, primarily in Donetsk Oblast (91.64 thousand housing units), Zaporizhzhia (10.28 thousand units), Luhansk (11.33 thousand units), Kherson (22.64 thousand units), Kharkiv (28.01 thousand units), Kyiv (23.74 thousand units), and Chernihiv (10.4 thousand units) Oblasts (Kyiv School of Economics, 2024). These are approximate figures for only one type of object – residential buildings

and structures. As of the beginning of 2023, the amount of waste from the destruction caused by the hostilities was estimated at 10–12 million tonnes (Ministry of Environmental Protection and Natural Resources, 2023). According to other data, as of April 2024, the amount of destruction waste was 223,237.3 tonnes or 235,780.9 cubic metres in Ukraine in total (Consequences of the war..., 2024). Without going into the reasons for such major differences in the volume of destruction waste and considering the daily growth of these figures, these fragmentary data illustrate the significance of urgently regulating the management of destruction waste, considering the specific features of wartime and the characteristics of this type of waste. Proper regulation of relations in this area is possible only through updating the legislative framework since the pre-war regulations do not reflect these features. The relevance of the study is also enhanced by the substantial reform of the waste management

sector as a result of the entry into force of the Law of Ukraine No. 2320-IX "On Waste Management" (2022) and the need to bring the current regulatory framework in line with it. The prerequisite for a qualitative transformation of the legal framework is to conduct scientific research, which is what the present study served.

Notably, the issue of waste generated as a result of military operations is gaining relevance in academic circles. Various aspects of this area are attracting the attention of researchers. A body of work is beginning to emerge that, albeit indirectly addressing the legal issues of managing the destruction waste generated by military action, creates the basis and outlines the relations that should be subject to legal regulation. O. Khrushch *et al.* (2023) investigated the issue of the impact of the Russian war on the environment overall and the pollution of the environment by war waste specifically. O. Hanoshenko *et al.* (2024) focused on the problem of the destruction of waste management infrastructure and, as a result, the increased environmental damage caused by the spontaneous accumulation of war waste. Interesting were the proposals made to develop concepts for waste reclamation, assessment and calculation of destruction waste as a basis for further planning and implementation of comprehensive measures to clean territories from war waste. Some researchers are working on the issue of regulating the reuse of waste, including destruction waste. For instance, V. Shvedun *et al.* (2023) explored the possibilities of building a circular economy and the potential for waste use in wartime and during the post-war reconstruction of Ukraine, proposing the development and implementation of a targeted comprehensive solid waste management programme. N. Antoniuk and V. Kostiuk (2024) determined the potential for reuse of construction waste generated by the destruction caused by military operations. The researchers substantiated the

need to apply the basic principles of the circular economy in post-war reconstruction and the establishment of a Ukrainian market for secondary construction materials. Of interest are also the developments of experts on radical changes in the urban environment caused by extensive destruction and the formulation of proposals for the use of destruction waste as a resource for the reconstruction (on the example of cities such as Borodianka and Irpin) (Ivashko *et al.*, 2024).

In terms of research on the legal aspects of managing the waste from the destruction caused by military operations, the study by M. Potip (2023b), deserves attention. The researcher paid considerable attention to the definition of the term 'war waste', its classification, and specific features of utilisation, and proposed corresponding amendments to the legislation. O. Trehub (2023; 2024) addressed the issue of defining the term "destruction waste", also exploring the feasibility of assessing the environmental impact of activities related to the management of this type of waste, and the prohibition of further use of asbestos-containing destruction waste.

Paying tribute to the above and other studies on destruction waste management and legal support in this area, it is necessary to continue work in this field, as new problematic aspects emerge with the accumulation of experience in applying legislation on this type of waste. Considering the above, the purpose of this study was to investigate the state of legal regulation of management of a new category of waste for Ukraine – waste from the destruction of buildings and structures resulting from military operations, and to formulate conclusions and proposals which are new to legal science. To fulfil this purpose, the following tasks were outlined: to provide a general description of the legislation on destruction waste; to investigate the legal issues of accounting for destruction waste, its storage, and management of destruction waste whose owner is not identified;

to analyse the state of legal regulation of destruction waste management planning.

Materials and Methods

The comprehensiveness and objectivity of the study was achieved through a broad source base. It was based on general regulations on waste management and special legislation on the management of destruction waste. These included the Law of Ukraine No. 2320-IX "On Waste Management" (2022), which served as the basic law for the area under study, the Land Code of Ukraine (2001), the Law of Ukraine No. 280/97-BP "On Local Self-Government in Ukraine" (1997). The study used the regulations of programme nature, such as the National Waste Management Plan until 2033 (Resolution of the Cabinet of Ministers of Ukraine No. 1353-p, 2022). The analysis of the array of subordinate regulations helped to identify the specific features and key shortcomings of the legal framework for the management of destruction waste: the Procedure for Management of Waste Generated in Connection with Damage (Destruction) of Buildings and Structures as a Result of Hostilities, Terrorist Acts, Sabotage or Works to Eliminate Their Consequences and Amendments to Certain Resolutions of the Cabinet of Ministers of Ukraine (Resolution of the Cabinet of Ministers of Ukraine No. 1073, 2022), the National Waste List (Resolution of the Cabinet of Ministers of Ukraine No. 1102, 2023), the Waste Classification Procedure and the National Waste List (Resolution of the Cabinet of Ministers of Ukraine No. 947, 2023), the Guidelines for the Development of Regional Waste Management Plans (Order of the Ministry of Environmental Protection and Natural Resources of Ukraine No. 403, 2024), the Procedure for Dismantling Objects Damaged (Destroyed) as a Result of Emergencies, Military Operations or Terrorist Acts (Resolution of the Cabinet of Ministers of Ukraine No. 474, 2022), the Procedure for Identification and Accounting

of Ownerless Waste (Resolution of the Cabinet of Ministers of Ukraine No. 1217, 1998). The content of perspective documents was also studied, such as the Draft Resolution of the Cabinet of Ministers of Ukraine "Some Issues of Identification and Accounting of Waste Whose Owner is Not Established" (2024).

The study's task and purpose, as well as the study's source base, were accomplished through the use of a combination of methods of scientific cognition. The study was based on the formal logical method, which enabled a meaningful characterisation of the basic category of the study – "destruction waste". The historical legal method was useful in studying the retrospective of legal regulation of the waste management sector and identifying those aspects that must be adjusted considering the new reality of public life in Ukraine. The formal legal method in combination with the synthesis method helped to identify areas for improving the legislation on destruction waste management. The abstract logical method helped to summarise the findings of the study and formulate relevant concrete proposals for changes to regulations and solving problematic issues.

Results and Discussion

General characteristics of legislation on destruction waste. Since Ukraine had not faced such a specific type of waste as destruction waste before the full-scale Russian invasion, special legislation to regulate relations on the treatment and management of this waste dates to 2022. In September 2022, the Procedure for Management of Waste Generated in Connection with Damage (Destruction) of Buildings and Structures as a Result of Hostilities, Terrorist Acts, Sabotage or Works to Eliminate Their Consequences and Amendments to Certain Resolutions of the Cabinet of Ministers of Ukraine (Resolution of the Cabinet of Ministers of Ukraine No. 1073, 2022), (hereinafter – Procedure No. 1073), which is still

the principal document to regulate the mechanism of destruction waste management.

As for the general principles of waste management, including destruction waste, as of the first half of 2025, the legal framework has been substantially updated: the Law of Ukraine No. 187/98-BP "On Waste" (1998) was replaced by the Law of Ukraine No. 2320-IX "On Waste Management" (2022), which entered into force on 9 July 2023. In pursuance of the provisions of this law, another document significant in the context of this study was adopted – the National Waste List (Resolution of the Cabinet of Ministers of Ukraine No. 1102, 2023), which singles out "waste generated due to damage (demolition) of buildings and structures as a result of hostilities, terrorist acts, sabotage, or work to eliminate their consequences".

Based on the above, at first glance, the legal basis for regulating relations regarding the handling and management of destruction waste appears to have been created. However, a detailed analysis of the content of the relevant acts reveals a series of major shortcomings. First of all, the framework Law of Ukraine No. 2320-IX "On Waste Management" (2022) does not contain special provisions that would address the specific features of destruction waste management. The law operates with the term and establishes rules for managing "construction and demolition waste". However, these wastes are not identical. The National Waste List (Resolution of the Cabinet of Ministers of Ukraine No. 1102, 2023) clearly distinguishes them into distinct categories: group "16 12" and group "17", respectively. In addition, as fairly noted by O. Trehub (2024), despite numerous proposals to define the term "destruction waste" in the said Law, this has not yet been done. Analogously, proposals to include in the Law the provisions on the requirements for the collection, transportation, storage, and treatment of destruction waste have stayed in

the theoretical plane (Synchanskyy, 2024). Such an approach can be explained by positioning destruction waste as a temporary phenomenon that will cease to exist after the end of hostilities. Moreover, Procedure No. 1073 (2022) is also limited in time. It is designed to cover the period of martial law and the reconstruction period. The latter is defined as 90 calendar days from the date of termination or cancellation of martial law in Ukraine. However, considering the composition of destruction waste, which includes harmful and hazardous components (asbestos, mercury, hazardous components of electrical and electronic equipment, waste explosives and ammunition, etc.), the large volumes of such waste, the difficulty (and often impossibility) of sorting this waste, the lack of practical experience in handling such waste and reliable information about its impact on the environment and humans, including in the long term, it would be wrong to expect that this waste will be "transformed" into any other type. Destruction waste is a new component of the modern Ukrainian reality, and it is neither possible nor advisable to set timeframes for the existence of special legislation at this time.

Another significant aspect that the authors of the project "Waste of destruction: Research on the prospects" (2024) as a disadvantage is the recommendatory nature of Procedure No. 1073 (2022). Since the measures stipulated by it are only "recommended" to be taken by the executive bodies of village, town, and city councils (military administrations of settlements), there are no grounds for prosecution in case of failure to take such measures. Hence, the management of destruction waste currently largely depends on the will of these entities and is often purely formal. This issue could be resolved by revising the requirements of Procedure No. 1073 (2022) and making them binding on authorised entities at the local level. However, according to the authors of the study, it is worth remembering that

destruction waste is generated as a result of war, under unforeseen circumstances, without the possibility of any planning of its amount, and is always the result of extraordinary events for the community. Therefore, before moving on to the imperative of managing the issue of destruction waste, it is necessary to address the shortcomings and gaps in Procedure No. 1073 (2022) that complicate and often render it impossible to implement destruction waste management measures at the local level.

Accounting for destruction waste. One of the aspects that must be improved is the accounting of destruction waste. According to Item 7 of Procedure No. 1073 (2022), such accounting should occur either at the place of generation of such waste, or at the places of its temporary storage, or at the facilities for its treatment. This function is entrusted to the authorised bodies (executive body of the village, town, city council (military administration of the settlement(s))). The information received must be posted on the official website of the authorised body. There is also a provision for monthly reporting by the authorised bodies to the regional state administrations, which must submit the information generalised for the region to the Ministry of Communities and Territories Development of Ukraine.

In the fourth year of the full-scale Russian invasion, there is a very low level of compliance with these requirements (the introduction to this paper illustrated the wide discrepancies in the amount of waste from the destruction). In 2024, only six regions of Ukraine (Lviv, Khmelnytskyi, Odesa, Zaporizhzhia, Dnipro, and Sumy regions) submitted information on destruction waste accounting, including three regions in the form stipulated by Procedure No. 1073 (2022) (ELH, 2024). In most cases, this is the amount of destruction waste placed in temporary storage facilities. The volume of destruction waste at the places of its generation was not actually recorded.

The principal reason for this situation was the lack of tools to quickly calculate the amount of waste. The most common method practiced by the authorised bodies was to determine the volume of waste removed by using the volume of the vehicle body used to transport the waste to temporary storage sites. As a result of extensive work in the summer of 2024, the NGO RESINK developed Guidelines for determining the volume of waste generated due to damage (demolition) of buildings and structures as a result of hostilities, terrorist acts, and sabotage (Satin et al., 2024) and an online calculator for waste from destruction that allows estimating the amount of waste in a few clicks based on the type of building, building area, or area of destruction (UST, 2023). Such results are highly commendable, as they are useful for authorities and greatly simplify the calculation of the amount of destruction waste generated. However, these developments have not yet been consolidated/reflected at the regulatory level. Considering the need to improve the regulation of the issue of accounting for destruction waste and unify the methods of calculation, the authors of the present study suggest that the Ministry of Communities and Territories Development of Ukraine consider approving the Methodological Recommendations for Determining the Volume of Destruction waste Generation at the level of an order and include a provision on their application in Procedure No. 1073 (2022). The authors of the study also believe that Procedure No. 1073 (2022) should establish the obligation to record the amount of destruction waste both at the places of its generation and at the places of storage, which will enable more substantive planning of further actions with such waste.

In addition, the current Procedure No. 1073 (2022) contains a list of components of destruction waste and possible ways to reuse them in Annex 1. This list does not factor in all types of destruction waste stipulated in the

National Waste List (2023). Namely, it does not include “ammunition waste”, “pyrotechnic waste”, “other explosive waste”, “destroyed military equipment”, “destroyed military equipment that does not contain liquid or other hazardous substances”, “damaged vehicles”, “damaged vehicles that do not contain liquid or other hazardous substances”. This discrepancy must be addressed by amending Procedure No. 1073.

Storage of destruction waste. According to Items 17 and 25 of Procedure No. 1073 (2022), destruction waste must be disposed of at waste treatment facilities. If the volume of destruction waste exceeds the capacity of waste treatment facilities, temporary storage facilities must be arranged. The requirements for temporary storage sites for destruction waste are set out in paragraphs 26-28 of Procedure No. 1073 (2022). Therewith, Resolution No. 964 “On Amendments to Certain Resolutions of the Cabinet of Ministers of Ukraine in the Field of Waste Management” (2024) clarified these requirements: the condition prohibiting the construction of temporary storage sites no closer than 2 kilometres from water bodies was removed, and the requirements for covering temporary storage sites were simplified. The law prohibits the construction of temporary storage sites for destruction waste within water protection zones and on land belonging to the category of water fund lands – paragraph 5 of Item 26 of Procedure No. 1073 (2022). Therewith, it is worth noting that this provision contradicts Item 27 of Section X of the Land Code of Ukraine (2001), which establishes the specific features of land relations regulation for the period of martial law. Analysis of the content of paragraph 5, Item 27.11. of Section X of the Land Code shows that the lands of the water fund may be used for temporary storage of waste from destruction. However, the type of designated purpose of the land plot and the type of functional purpose of the territory must be

consistent. Considering the superior legal force of the Code, the prohibition established by Procedure No. 1073 (2022) (a regulation of lower legal force) does not apply. Considering the danger of destruction waste to the environment and humans, the authors of this study propose to amend paragraph 5, Item 27.11. of Section X of the Land Code of Ukraine (2001) by excluding the lands of the water fund from those where temporary storage sites for destruction waste may be located.

As practice shows, at present, in territorial communities, the places of temporary disposal of destruction waste are either designated places at solid waste landfills or designated temporary storage sites (ELH, 2024). Here, according to N. Krasilich (2024), it is necessary to clearly understand the temporary nature of the stay of destruction waste in temporary storage sites. The longer such waste stays there, the greater damage it causes to the environment and human health. It is worth supporting the opinion expressed by D. Tokarchuk (2022), who pointed out that destruction waste should be disposed of at specialised landfills, without allowing the disposal of municipal solid waste or construction waste.

The key issue is the creation of construction waste treatment facilities that would ensure that all the operations required by law to manage construction waste are carried out. Due to limited material resources and technical capabilities, as well as a lack of personnel, the authorised bodies at the local community level are unable to solve this problem. It is worth agreeing with the thesis of O. Nasarenko *et al.* (2023) on the need to factor in the different amounts of destruction depending on the region and the intensity of hostilities, which makes it much more challenging for local communities to address the issue of destruction waste management. As Japan’s experience in managing destruction waste suggests, a comprehensive approach is needed at this stage, at the level of the state (Japan’s experience in..., 2024).

The key aspects include clear instructions to the authorised bodies on how to work with destruction waste; technical support to the authorised bodies (including sending experts to organise work with destruction waste); financial support (when the state reimburses the costs of destruction waste management). At the state level, it is also advisable to work on identifying the most suitable locations for the construction of destruction waste management facilities. It is possible to consider the experience of Syria in this area (Madi & Srour, 2019), based on the consequences of military operations and the extensive destruction they caused.

Planning for destruction waste management. Determination of the amount of destruction waste generated and arrangement of places for its temporary storage are only preliminary measures/operations in the management of this waste. The effectiveness of further operations, such as recovery of destruction waste, its removal and disposal, depends to a large extent on the quality of planning of these activities. Experts point out that without adequate planning for the recovery (namely, use as secondary materials) of destruction waste, and primarily construction waste, the area required for its disposal will increase manifold (Fisunenکو & Herasymova, 2022). This is unacceptable considering the overloading of existing landfills, the complexity of setting up new ones, and the environmental impact of such facilities. When analysing approaches to the management of destruction waste, it is advisable to consider the experience of industrial waste disposal, specifically ash and slag materials containing MgO and CaO (Orfanova, 2023).

According to the Law of Ukraine No. 2320-IX (2022), waste management planning is carried out at several levels: national, regional, local, and local (at the level of business entities). The highest level in the waste management planning hierarchy is the National Waste Management Plan.

According to Art. 51 of the Law, the National Waste Management Plan is developed for 10 years and is subject to revision every 4 years. The National Waste Management Plan until 2030, adopted in 2019 (Resolution of the Cabinet of Ministers of Ukraine No. 117-p, 2019), was in force until December 2024, with the last amendments introduced in September 2020 (Resolution of the Cabinet of Ministers of Ukraine No. 826, 2020), which included a change in the name of the relevant ministry. Despite the envisaged period of validity until 2030, this National Waste Management Plan did not address the reform of waste legislation and should have been revised in 2023 at the very least. It is logical that this document did not contain any mention of the management of destruction waste, since as of 2019, this type of waste was not distinguished in principle.

Resolution of the Cabinet of Ministers of Ukraine No. 1353-p (2024) approved the new National Waste Management Plan until 2033. It mentions destruction waste in the context of the war's impact on the waste management sector, states the extensive amount of such waste and prioritises the maximum possible reuse of this waste. The Action Plan for the Implementation of the National Waste Management Plan for 2025–2033 (Resolution of the Cabinet of Ministers of Ukraine No. 1353-p, 2024) approved by the same order stipulates a series of measures related to the management of destruction waste. The first of them involves conducting analytical studies and developing economic models for the management of destruction waste. The implementation period is 2025 and 2026. The performance indicators show that the measure has been implemented. However, as it has been repeatedly noted, there are still many unresolved aspects, including economic ones, related to the management of destruction waste.

The second measure is the creation of networks of local and regional facilities for the

treatment of local destruction waste. The implementation period is 2025-2033. Progress indicator – completed. It is difficult to agree with this, since a) the war is ongoing and it is impossible to predict when the hostilities will end and, accordingly, the destruction of facilities will stop; b) only individual projects on recycling of destruction waste are being implemented, usually with the support of foreign sponsors (e.g., the Pilot Project on Recycling of Destruction waste in Kyiv Region with the support of the Japan International Cooperation Agency (Waste from the destruction..., 2024). The systemic work at the national level is out of the question for the time being.

The third is the development of amendments to the Procedure for the development, approval and approval of local waste management plans (Resolution of the Cabinet of Ministers of Ukraine No. 947, 2023) regarding the management of waste from destruction. The deadline for completion of the measure is 2026. Milestone: a draft act has been submitted to the Cabinet of Ministers of Ukraine. In its current version, the Procedure does not contain any mention of destruction waste at all. This is difficult to explain, since as of 2023, this problem has already occurred, especially at the local level, and it is the executive bodies of village, town, and city councils that are responsible for organising and coordinating the management of destruction waste. The deadline for implementation of the measure (2026) is also controversial. Local authorities should already have clear guidelines for managing destruction waste, and any delay will only complicate further steps towards the possible recovery of such waste.

Considering the above shortcomings, it would be advisable to revise the National Waste Management Plan until 2033 (2024) to detail measures for managing destruction waste. Based on the National Waste Management Plan, Regional Waste Management Plans for each region of Ukraine should be developed within a year of

its entry into force – Article 51 of Law of Ukraine No. 2320-IX (2022). According to the Guidelines for the Development of Regional Waste Management Plans, approved by Order of the Ministry of Environmental Protection and Natural Resources of Ukraine No. 403 (2024), this document should contain a description of the current state of the waste management system. According to Item 4.2 of the Guidelines for the Development of Regional Waste Management Plans, destruction waste is not separated into a separate type in this part of the plan but is a type of construction and demolition waste. Analogous requirements are contained in the Requirements for Sections of the Draft Regional Waste Management Plan (Order of the Ministry of Environmental Protection and Natural Resources of Ukraine No. 81, 2024). This cannot be agreed with, as scientists have argued for the distinction between “destruction waste” and “construction and demolition waste”. Even though the Procedure No. 1073 (2022) distinguishes “waste generated by the dismantling of objects that were damaged or destroyed” by their origin, they cannot be identified with construction and demolition waste. The latter are generated under controlled conditions. There is a possibility of preliminary removal of hazardous items/elements/components. Preliminary waste sorting is possible. Destruction waste is the residue of various materials, substances, and objects that are always generated unpredictably. Along with construction materials that are valuable for reuse, it also includes household waste, hazardous substances in household items, and the remains of explosives, missiles, bombs, shells, etc. Often, destruction waste also contains the remains of human bodies (Safranov *et al.*, 2024). The National Waste List (2023) also clearly delineates destruction waste, as mentioned above. There are also specially developed rules for dismantling damaged (destroyed) facilities due to military operations, set out in the Procedure for

the dismantling of facilities damaged (destroyed) as a result of emergencies, military operations or terrorist acts (Resolution of the Cabinet of Ministers of Ukraine No. 474, 2022).

Another drawback of the Requirements for Sections of the Draft Regional Waste Management Plan (2024) is the inaccuracy of terminology in the area under study. Thus, Section II defines the term “destruction waste”. However, further on, sub-item 4.2.3.2 of Annex 1 mentions “waste from demolition”. Although these phrases are remarkably close, they can be considered different in terms of legal terminology. To avoid different interpretations of the content of the Methodological Recommendations for the Development of Regional Waste Management Plans and, subsequently, the implementation of regional plans, it is necessary to unify this concept by using a single term “destruction waste”.

To conclude the analysis of the state of legal support for planning of destruction waste management, let us focus on the requirements for local waste management plans. It was mentioned above that the Procedure for Developing, Approving and Approving Local Waste Management Plans (Resolution of the Cabinet of Ministers of Ukraine No. 947, 2023) does not mention any destruction waste. Item 14 of this document stipulates the inclusion of information on construction and demolition waste in the structure of industrial waste in the plan. The Guidelines for the Development of Local Waste Management Plans (2024) also do not address destruction waste. And the structure of the local waste management plan does not include this type of waste at all.

However, according to Part 5 of Article 52 of the Law of Ukraine No. 2320-IX “On Waste Management” (2022), local waste management plans must be coordinated with regional level plans. This will not be achieved if the established requirements are not met. Moreover, local authorities are to a certain extent removed from the

problem of destruction waste, which contradicts Procedure No. 1073, which recognises them as authorised bodies for accounting and organising destruction waste management operations.

The analysis of the source base shows that the local level is the basic level for organising effective waste management, including destruction waste. The Law of Ukraine No. 280/97-BP (2022) in its Article 26 stipulates the powers of local self-government bodies in the field of waste management. An analysis of these powers shows that local governments perform a full range of actions – from planning to selecting organisations for waste management. Waste management is a kind of “indicator” by which the work of local authorities is assessed (Potip, 2023a). In academic circles, a position is expressed regarding the unique role of local authorities and their high social responsibility in waste management at the local level (Tretyak, 2021).

It is at the community level that separate waste collection and sorting can be ensured, local businesses can be involved in the organisation of reuse of destruction waste, and cooperation with stakeholders can be established (Shyshpanova, 2023). Regional and national waste management policies should be based on the needs and capacities of local communities. This will ensure the effective implementation of the waste management hierarchy. Experts note that the latter is one of the key aspects of waste management reform and is in line with European principles in this area (Kravchenko, 2023). To improve the management of destruction waste at the local level, it is necessary to reflect these types of waste in Item 2 of part 2 of Article 26 of the Law of Ukraine No. 2320-IX “On Waste Management” (2022) and in sub-item 6 of Item ‘a’ of Part 1 of Article 30 of the Law of Ukraine No. 280/97-BP “On Local Self-Government in Ukraine” (1997). Effective management of destruction waste requires unification of terminology, consistency of regulations,

and active participation of local authorities, as it is at the community level that the waste management hierarchy is implemented following the European standards.

Management of unidentified destruction waste. The problem of so-called ownerless waste has always been a pressing issue for Ukraine. Illegal landfills have been a source of pollution of land, water, and the air. Studies of the pre-war period indicate that Ukraine lacks an infrastructure for managing such waste (Zaikova, 2021). This problem has become even worse since the war. The amount of unidentified waste, including destruction waste, is increasing. The reasons for this include the death of property owners, owners moving to another area or abroad, owners' inability to handle the volumes of destruction waste generated independently, overloading of existing landfills, etc. The imperfection of legal regulation in this area also does not help to improve the situation. According to Item 6 of Procedure No. 1073 (2022), the obligation to determine the owner of destruction waste is assigned to the authorised body (i.e., the executive bodies of village, town, or city councils). If the owner of destruction waste cannot be identified or such identification is not possible, the authorised body should organise the management of such waste. When determining the owner of destruction waste, the authorised body should be guided by the Procedure for Identification and Accounting of Waste Whose Owner is Not Established. The development of this document is stipulated by Item 14, Part 1, Article 19 of the Law of Ukraine No. 2320-IX (2022). However, this document is currently only in draft form. The Procedure for Identification and Accounting of Ownerless Waste (1998) is still in force. Having been developed according to the invalid Law of Ukraine No. 187/98-VR "On Waste" (1998), it at the very least does not follow the provisions of the current Law of Ukraine No. 2320-IX (2022).

In addition, according to L. Zaikova (2022), the existing Procedure for Identification and Accounting of Ownerless Waste (1998) does not contain an algorithm for local authorities to identify the owner of waste, and there is no concrete authority for the commission on ownerless waste management. This leads to complications in the work of such commissions, and their work is limited to identifying and recording ownerless waste. The Draft Resolution of the Cabinet of Ministers of Ukraine "Some Issues of Identification and Accounting of Waste Whose Owner is Not Established" (2024), which was published for discussion, contains a new Procedure for the identification and accounting of waste whose owner is not established. It is more substantive than the previous one, which the authors of the present study consider positive. The new Procedure regulates in detail the waste identification procedure, establishing the owner of waste and/or the waste generator, and the procedure for waste accounting with unified forms of documents. The adoption of this Procedure, in the authors' opinion, will facilitate and improve the regulation of the issue of identifying and accounting for waste whose owner is not identified. However, Item 2 of this Procedure contains a caveat: it does not apply to the identification and accounting of waste from destruction. However, this reservation is immediately clarified "unless otherwise stipulated by legislation". The Procedure No. 1073 (2022) explicitly states that the Procedure for Identification and Accounting of Waste Whose Owner is Not Identified should be applied. Moreover, there are currently no other regulatory documents that would govern this aspect, which effectively creates a gap in the legislation. To avoid this, it is advisable to exclude item 2 from the draft Procedure for Identification and Accounting of Waste Whose Owner is Not Identified. This will close the issue of destruction waste whose owner is not identified.

Conclusions

Summarising the findings of the study of the state of legal regulation of destruction waste management, the authors of the study offer the following conclusions which are new to legal science and confirm the achievement of the purpose of the study and completion of the tasks set. It was found that Ukraine is currently developing legislation on destruction waste management. The legal framework in this area is already characterised by the existence of a framework law and special subordinate legislation which address the specifics of this particular waste management. The key shortcomings in this area are gaps in the Law of Ukraine "On Waste Management" and Procedure No. 1073.

The Law of Ukraine "On Waste Management" lacks a clear definition of the concept of "destruction waste", which complicates its identification and management. Furthermore, despite the allocation of this category in the National Waste List, the law continues to use the broader term "construction and demolition waste", which creates potential legal conflicts. In addition, the study revealed that Procedure No. 1073, which is the key regulation in this area, has a series of substantial shortcomings. Firstly, it is limited to the period of martial law and reconstruction, which does not consider the long-term nature of the problem of disposal of such waste. Secondly, its provisions are of a recommendatory nature, which leads to selective application by local governments and reduces the effectiveness of waste management measures.

The study substantiated the need to stipulate at the regulatory level the methodology for rapid calculation of the volume of destruction

waste and to establish the obligation to record the amount of such waste both at the places of its generation and at the places of temporary and final storage. To minimise the harmful impact of destruction waste on the environment and human health, it is advisable to prohibit the placement of temporary storage sites for destruction waste on water fund lands.

It was determined that the current National Waste Management Plan until 2033 does not provide a systematic approach to the management of construction waste at the state level, limiting itself to individual measures. In terms of planning for the management of destruction waste at the regional and local levels, it is necessary to stipulate a separate component of regional and local management plans for this waste, without identifying it with construction and demolition waste. To overcome the problem of managing destruction waste whose owner is not identified, the study proved the need to extend the Procedure for Identification and Accounting of Waste Whose Owner is Not Identified to destruction waste.

Promising areas for further research include the development of effective legal mechanisms for the accounting and disposal of destruction waste, improvement of the regulatory framework for its storage, integration of circular economy principles into the management of such waste, and study of international experience to adapt best practices to Ukrainian legislation.

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Conflict of Interest

None.

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Управління відходами від руйнувань: проблеми правового регулювання

Володимир Єрмоленко

Доктор юридичних наук, професор

Національний університет біоресурсів і природокористування України

03041, вул. Героїв Оборони, 15, м. Київ, Україна

<https://orcid.org/0000-0002-4295-4158>

Вікторія Мельник

Кандидат юридичних наук, доцент

Білоцерківський національний аграрний університет

09117, Соборна площа, 8/1, м. Біла Церква, Україна

<https://orcid.org/0000-0002-1287-8799>

Тамара Новак

Кандидат юридичних наук, доцент

Національний університет біоресурсів і природокористування України

03041, вул. Героїв Оборони, 15, м. Київ, Україна

<https://orcid.org/0000-0003-2371-3014>

Анотація

Стаття присвячена дослідженню правових аспектів управління відходами від руйнувань будівель та споруд, що утворюються через воєнні дії. Актуальність роботи зумовлена тим, що відходи від руйнувань є новою для України категорією відходів, яка з'явилась вже під час повномасштабної війни. Новими є й відносини із управління відходами від руйнувань. Ці відносини потребують спеціального правового регулювання, формування масиву нормативних актів, у яких би відображались як особливості цих відходів, так і особливості здійснення операцій з управління ними з урахуванням сучасних реалій. Вивчення стану правового регулювання управління відходами від руйнувань, виокремлення основних недоліків у цій сфері та формулювання нових для юридичної науки висновків та пропозицій й складає мету цього дослідження. Досягнення поставленої мети стало можливим через використання

в роботі комплексу методів наукового пізнання: діалектичного методу, методу аналізу, формально-логічного методу, історико-правового методу, формально-юридичного методу та методу синтезу. В результаті проведеної роботи було встановлено, що законодавство України у сфері управління відходами не відображає належним чином специфіку управління відходами від руйнувань. Для покращення стану правового регулювання даної сфери розроблено пропозиції щодо закріплення на рівні підзаконного нормативного акту алгоритму обрахунку обсягів утворених відходів від руйнувань, контролю їх кількості на різних етапах поводження з ними, удосконалення порядку управління відходами від руйнувань, власник яких не встановлений. Визначено недоліки планування управління відходами від руйнувань на національному, регіональному та місцевому рівнях, а також напрацьовано пропозиції щодо відображення у відповідних планах управління відходами заходів із управління відходами від руйнувань. Отримані результати мають теоретичне значення для правової науки в частині досліджень проблем управління відходами руйнувань, мають практичну цінність – при подальшому реформуванні законодавства про управління відходами, а також можуть бути використанні в роботі уповноважених суб'єктів при організації операцій з управління відходами від руйнувань

Ключові слова: менеджмент відходів; відходи руйнування, пов'язані з війною; нормативно-правова база; операції з поводження з відходами; зберігання відходів; полігони; звалища відходів



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The essence of human rights and the transformation of their protection mechanisms

Ihor Sopelnyk*

Postgraduate student

Private institution Research Institute of Public Law

03035, 2A G. Kirpa Str., Kyiv, Ukraine

<https://orcid.org/0009-0008-4964-3193>

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Abstract

This study aimed to provide a theoretical justification and empirical assessment of the transformation of human rights protection mechanisms in response to wartime challenges, with the objective of formulating evidence-based recommendations to enhance their effectiveness. The research methodology was grounded in the natural law concept of human rights. It involved a systematic analysis of statistical data from the annual reports of the Ukrainian Parliament Commissioner for Human Rights, judgments of the European Court of Human Rights, and expert survey results. The study identified a significant transformation in human rights protection mechanisms, as evidenced by a notable increase in appeals to the Ombudsman, from 47,000 in 2019 to 95,796 in 2023. A direct correlation has been established between the accessibility of legal assistance and the effectiveness of rights protection. Correlation analysis also revealed a strong positive relationship between the number of regional offices of the ombudsman and the volume of appeals ($r = 0.89$), as well as between the intensity of hostilities and the number of recorded human rights violations ($r = 0.92$). Based on expert evaluation, which demonstrated a high level of consensus among specialists, a set of recommendations has been developed, with an average

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*Corresponding author

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estimated effectiveness of 4.5 out of 5. The proposals receiving the strongest expert support included the establishment of a unified information system for data exchange among human rights protection entities and the expansion of legal aid centres in the regions. The findings provided both a theoretical and practical foundation for the systematic improvement of human rights protection mechanisms under martial law and highlight the necessity of a comprehensive approach to implementing the proposed changes, taking into account regional specificities and current challenges

Keywords: human rights institutions; hostilities; monitoring observation; internally displaced persons; military personnel

Introduction

The modern world is characterised by the need for continuous improvement of legal tools to ensure fundamental rights and freedoms in the face of contemporary global challenges. The rapid development of digital technologies, the emergence of new forms of discrimination, armed conflicts and humanitarian crises create unprecedented threats to the realisation of human rights, requiring a rethinking of traditional approaches to their protection. The problem of ensuring human rights in the digital space is particularly acute, where traditional legal protection mechanisms often prove ineffective due to the cross-border nature of violations and the difficulty of identifying perpetrators. In the context of global political instability and economic uncertainty, there is a growing need to develop new international standards for the protection of human rights and mechanisms for their implementation at the national level. At the same time, the development of biotechnology and artificial intelligence raises new ethical and legal dilemmas regarding the limits of interference with fundamental human rights, which requires timely legal regulation. All this necessitates a comprehensive theoretical and legal study of the fundamental principles of human rights and ways to protect them at both the national and international levels, taking into account contemporary challenges and threats.

An overview of academic sources demonstrates that researchers are interested in exploring various dimensions of human rights and ways to ensure them. The study by O. Balynska *et al.* (2024) examines how digital transformation and globalisation processes affect the evolution of human rights. Researchers emphasise the importance of adapting the legal interpretation of human rights to contemporary challenges. Studying the consequences of the digitalisation of the legal sphere, scientists state that despite technological changes, the fundamental principles and essence of human rights remain relevant. Moreover, human rights can serve as a guide in the evaluation and implementation of innovative technologies. A separate focus of the study is aimed at examining how advances in biomedical sciences create new challenges in the field of human rights in the context of healthcare. P. Thielborger (2019) conducted an in-depth study of the concept of the “essence” of human rights in international law, highlighting different approaches to its understanding of civil and political rights and socio-economic rights. The scientist proved that for civil and political rights, the concept of essence is mainly associated with the concepts of inadmissibility of restriction and deviation from obligations, while for socio-economic rights, this concept relates primarily to the obligations of states to guarantee a basic level of protection regardless of their resource constraints.

R. Smith (2021) in their research provided a comprehensive analysis of international human rights, focusing on regional protection systems and key substantive rights. The author traced the unprecedented expansion of internationally recognised rights for all people and analysed the International Bill of Rights in detail. Attention was paid to the problems of human rights protection in the context of social media by B. Sander (2021), substantiating the need for a structural approach to human rights to address accountability issues in the modern digital ecosystem. The researcher developed a typology of various forms of governance provided by social media platforms and critically analysed two competing concepts of human rights law – market and structural.

In turn, A. Lawson and A. Beckett (2020) conducted an important study of the relationship between the social model of disability and the human rights model, refuting the widespread belief that the latter develops and improves the former. However, the authors proved the complementary nature of these models, emphasising their different functions and subjects. V.I. Borysova *et al.* (2019) explored the organisational and procedural aspects of the institution of judicial protection of subjective civil rights in Ukraine, formulating an author's vision of the problem of judicial protection of subjective civil rights and legally protected interests. As the study by O.M. Onishchuk *et al.* (2021), dedicated to the study of the reflection of the rule of law principle in international legal acts, showed, the jurisprudence of European institutions has a decisive impact on the formation and clarification of the rule of law doctrine. In particular, V. Teremetskyi *et al.* (2021) focused on the problem of protecting housing rights, defining the protection of housing rights as a broad category that includes mechanisms for guaranteeing the right to housing and direct protection in case of violation of housing rights. The authors analysed in detail the

categories of housing disputes and the functions of protecting housing rights.

L.C. Backer and C.M. O'Brien (2024) developed the concept of due diligence as a tool for protecting human rights, analysing its regulatory framework and application technologies in private law, international law-making and mandatory state measures. O. Onyshko (2022) studied in detail the protection of certain types of labour rights of citizens in the judgments of the European Court of Human Rights, identifying the main types of labour rights protected by the Convention for the Protection of Human Rights and Fundamental Freedoms. Y. Leheza *et al.* (2023) analysed the complex factors influencing the process of realising human rights in Ukraine, emphasising that guaranteeing respect for human rights in Ukraine is possible only through effective reform of the government system and adherence to a comprehensive approach to guaranteeing human rights by both the state and civil society.

The analysis of the scientific literature indicates the multifaceted nature of human rights research – from the theoretical understanding of their essence in the context of globalisation and digitalisation to the study of practical mechanisms for protecting rights at the national and international levels. Researchers emphasise the need for a comprehensive approach to human rights protection that takes into account both the institutional capacity of the state and the role of civil society. At the same time, issues related to the transformation of human rights protection mechanisms under martial law and the assessment of their effectiveness in crisis situations remain insufficiently explored.

This study aimed to define the essence of human rights and establish the effectiveness of their protection mechanisms in contemporary conditions in order to identify problematic aspects and develop practical recommendations for their improvement. The objectives of the study were to:

1) reveal the theoretical and legal foundations of human rights, their legal nature, content and system of classification in modern legal doctrine, as well as the specifics of regulatory consolidation at the international and national levels;

2) determine the features of the functioning of national and international human rights protection mechanisms in Ukraine, to assess their effectiveness and to identify the main problems of implementation in modern conditions;

3) substantiate the directions of improving the system of human rights protection in Ukraine, taking into account modern challenges, and develop practical recommendations for increasing the effectiveness of human rights protection mechanisms.

Materials and Methods

The conceptual and theoretical basis of the study was the natural law concept of human rights, which views human rights as inalienable possibilities inherent in the human personality from birth. The study used a set of interrelated methods of scientific cognition. The systematic method was used to analyse human rights protection mechanisms as a holistic system of interrelated elements, which made it possible to identify structural and functional relationships between different components of the human rights protection system.

The statistical method was used to process data on appeals to the Ukrainian Parliament Commissioner for Human Rights for Human Rights (2019; 2020; 2021; 2022; 2023), which included analysis of the dynamics of appeals, their territorial distribution and the structure of human rights violations. Correlation analysis was performed using Pearson's correlation coefficient ($p < 0.05$) to establish relationships between the number of regional offices of the ombudsman and the number of appeals. The relationship between the number of human rights violations and the intensity of hostilities, which was determined by the number

of shelling of settlements, destruction of civilian objects and civilian casualties, was also analysed.

The expert survey was conducted in October-November 2023 via the SurveyMonkey online platform, adhering to ethical principles following the ICC/ESOMAR International Code (2016). To form the expert panel, invitations were sent to 50 specialists through professional associations and human rights organisations. The sample included judges (30%), lawyers (40%), representatives of human rights organisations (20%) and scientists (10%) with an average work experience of 12 years, who met the established criteria: legal education, scientific degree and at least 5 years of experience in the field of human rights protection. The survey included a structured questionnaire with 25 closed and open questions regarding the effectiveness of existing rights protection mechanisms, the main problems in this area and recommendations for their solution. The Delphi method with two rounds of expert evaluation was used to achieve consensus. Statistical processing of the results of the expert survey was carried out using Kendall's coefficient of concordance $W = 0.78$, $p < 0.05$:

$$W = \frac{12 \times S}{m^2 \times (n^3 - n)}, \quad (1)$$

where S is the sum of squares of deviations of the sums of ranks from the average sum of ranks, m is the number of experts, and n is the number of evaluation objects.

The study was conducted in three consecutive stages: first, a theoretical and legal analysis of the concepts of human rights and their regulatory consolidation was carried out, then an empirical study of the effectiveness of human rights protection mechanisms was conducted based on statistical data and an expert survey, and in the final stage, practical recommendations were developed to improve the human rights protection system, taking into account the identified problems and challenges of wartime.

The regulatory framework of the study was a set of international and national legal acts, including the Universal Declaration of Human Rights (1948), the European Convention on Human Rights (1950), the Constitution of Ukraine (1996), the Law of Ukraine No. 776/97-VR "On the Ukrainian Parliament Commissioner for Human Rights" (1997), the Law of Ukraine No. 1706-VII "On Ensuring the Rights and Freedoms of Internally Displaced Persons" (2014). The time-frame of the research covers the period from 2019 to 2023, which makes it possible not only to track the dynamics of citizens' appeals and the effectiveness of human rights protection mechanisms in peacetime but also to assess the adaptability of these mechanisms to the challenges of martial law and mass human rights violations as a result of armed aggression against Ukraine. The study was based on statistical data from the annual reports of the Ukrainian Parliament Commissioner for Human Rights for Human Rights (2019; 2020; 2021; 2022; 2023), which included official statistical data from the Prosecutor General's Office of Ukraine on war crimes, data from the Office of the UN High Commissioner for Human Rights on civilian casualties, statistics from the National Information Bureau on the deportation of children and decisions of the European Court of Human Rights. The analysis of the practice of the European Court of Human Rights, in particular precedent decisions in the cases *Sanchez-Sanchez v. United Kingdom* (2022), *Basu v. Germany* (2023), *Ukraine and Netherlands v. Russia* (2023), which established important standards for the protection of human rights and the responsibility of states for their violation, was of particular importance for the study.

Results

The legal nature and content of human rights.

As a result of a comprehensive study of the legal nature and content of human rights, it was

established that the theoretical and methodological understanding of this fundamental legal phenomenon is based on three main conceptual approaches that have developed in the process of the historical development of legal doctrine and philosophy of law. The natural law concept, the fundamental principles of which were laid down in the studies of J. Locke (1689) and J.-J. Rousseau (1762), substantiates the existence of human rights as inalienable possibilities that are immanently inherent in the human personality from birth and exist independently of their formal recognition by the state or consolidation in positive law. According to this doctrinal position, human rights have a super-positive character; that is, their existence is determined by the very nature of man as a rational and moral being, and the role of the state is solely to recognise, ensure and create effective mechanisms for their protection.

This conceptual approach became the theoretical foundation for the development of the modern concept of human rights and received regulatory consolidation in international human rights law and the constitutional legislation of democratic states. The positivist approach, theoretically substantiated in the research of H. Kelsen (1934) and his followers, is based on diametrically opposite methodological principles and associates the legal existence of human rights exclusively with their formal consolidation in positive law and enforcement by state coercion. Representatives of this scientific direction advocate the position that human rights are the result of the sovereign expression of the will of state power and exist exclusively within the limits established by law. The sociological concept, the conceptual foundations of which were laid in the studies of E. Ehrlich (1913) and further developed in the works of representatives of the sociological school of law, considers human rights as a complex social phenomenon that arises and evolves in the process of social interaction and reflects the objective

needs of people in a specific historical period of civilisation development. This theoretical construct focuses on the social conditionality of human rights and their determination by the level of development of social relations, the economic potential of the state and other social factors.

The establishment of international legal norms regarding the protection of human rights occurred after the end of World War II when the global community reacted to large-scale human rights violations by creating a comprehensive system of international agreements. This process initiated the development of the modern concept of international law in the field of human rights. The adoption of the Universal Declaration of Human Rights (1948) was the first step towards the international recognition of basic rights and freedoms. The document proclaimed the inalienability of human rights and established the fundamental principle of non-discrimination on any grounds. Although the Declaration initially had the status of a recommendation document of the UN General

Assembly, its provisions, thanks to systematic use by states, were transformed into norms of international customary law, binding on the entire international community. An important stage was the adoption of the European Convention on Human Rights (1950), which not only expanded the understanding of fundamental rights but also introduced an effective mechanism for their protection through the European Court of Human Rights, whose decisions are binding and define uniform standards in the European legal space. The next step was the adoption of the International Covenant on Civil and Political Rights (1966) and the International Covenant on Economic, Social and Cultural Rights (1966), which expanded the list of rights and specified the obligations of states to comply with them, in particular regarding the creation of appropriate infrastructure for the realisation of human rights. Table 1 reflects the evolution of the system of basic UN treaties in the field of human rights, developed from the second half of the 20th century to the beginning of the 21st century.

Table 1. Main UN human rights treaties

Main UN human rights treaties	Monitoring body	Optional protocols
International Convention on the Elimination of All Forms of Racial Discrimination (1965)	Committee on the Elimination of Racial Discrimination	–
International Covenant on Civil and Political Rights (1966)	Human Rights Committee	First Optional Protocol, which establishes a mechanism for submitting individual complaints. Second Optional Protocol aims at the abolition of the death penalty
International Covenant on Economic, Social and Cultural Rights (1966)	Committee on Economic, Social and Cultural Rights	Optional Protocol to the International Covenant on Economic, Social and Cultural Rights (2008)
Convention on the Rights of the Child (UN General Assembly, 1989)	Committee on the Rights of the Child	Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict. (2000). Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography (2000). Optional Protocol to the Convention on the Rights of the Child on a Communications Procedure (2011)
Convention on the Elimination of All Forms of Discrimination against Women (UN General Assembly, 1979)	Committee on the Elimination of Discrimination against Women	Optional Protocol on the right to submit complaints by individuals

Table 1. Continued

Main UN human rights treaties	Monitoring body	Optional protocols
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (1984)	Committee against Torture	Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (2002)
International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990)	Committee on the Protection of the Rights of All Migrant Workers and Members of Their Families	Optional Protocol on the right to submit complaints by individuals
Convention on the Rights of Persons with Disabilities (2006)	Committee on the Rights of Persons with Disabilities	Optional Protocol on Communications allows individuals and groups to submit petitions to the Committee
International Convention for the Protection of All Persons from Enforced Disappearance (2006)	Committee on Enforced Disappearances	–

Source: developed by the author based on the Council of Europe (2023)

The system presented in Table 1 demonstrates a three-tiered structure of the human rights protection mechanism within the UN, reflecting the evolutionary development of international legal regulation in this area. The first level consists of basic treaties (conventions), which establish international legal standards of both a general nature (prohibition of discrimination) and regarding the protection of the rights of specific vulnerable groups (children, women, people with disabilities, migrants). The second level is made up of treaty bodies – specialised committees authorised to monitor the implementation by member states of their treaty obligations through a system of periodic reporting, consideration of individual appeals and conducting investigations. The third level consists of optional protocols, which expand the competence of control bodies and establish additional procedures for the protection of human rights, including mechanisms for individual complaints and procedures for investigating serious violations. Of particular importance is the relationship between all elements of this system, which ensures a comprehensive approach to the protection of human rights and creates a multi-level mechanism of international control over the observance by states of their

obligations. This institutional architecture allows for an effective response to new challenges in the field of human rights and the adaptation of international legal mechanisms for their protection to the needs of the modern world.

The constitutional and legal regulation of human rights in Ukraine, based on generally recognised international legal standards, reflects modern doctrinal approaches to understanding human rights and creates a regulatory framework for their effective protection. The Constitution of Ukraine (1996), in Chapter II: Human and Citizens' Rights, Freedoms and Duties, enshrines a broad catalogue of fundamental rights and freedoms, establishes a system of legal guarantees for their implementation and provides for institutional mechanisms for their protection. The provision of Article 3 of the Constitution of Ukraine, which enshrines the fundamental principle by which the state recognises the priority of the human person, his life, health, dignity, safety and inviolability as the highest social values, is of fundamental importance. At the same time, the protection and realisation of human rights and freedoms are defined as the primary task of state institutions. This constitutional provision acts as a foundational principle of Ukraine's

legal system and defines the teleological direction of all state authorities. A systematic analysis of the constitutional provisions demonstrates the implementation of all basic categories of human rights, including fundamental civil rights (right to life, liberty and security of person, right to respect for human dignity, right to freedom of thought and expression), political rights (active and passive suffrage, right to form political parties and public organisations, right to peaceful assembly), economic rights (right to private property, right to entrepreneurial activity, right to work), social rights (right to social protection, right to housing, right to health care) and cultural rights (right to education, freedom of literary, artistic, scientific and technical creativity).

In contemporary legal doctrine, a comprehensive system of scientific classification of human rights has been developed, which reflects various aspects of this multidimensional legal phenomenon and contributes to a deeper understanding of its essential characteristics. Based on the criterion of historical evolution, human rights are differentiated into three generations: the first generation encompasses fundamental civil and political rights that ensure the individual autonomy of the person and their participation in the political life of society; the second generation includes socio-economic and cultural rights that guarantee a sufficient standard of living and the comprehensive development of the person; the third generation combines collective rights (right to peace, right to development, right to a safe environment), which reflect the solidarity of humanity in the face of contemporary global challenges. Based on the subject composition of legal relations, individual rights, held by a single individual, and collective rights, which can only be realised in conjunction with other subjects (right of peoples to self-determination, rights of national minorities, rights of indigenous peoples), are distinguished. Regarding the possibility of lawful

restriction, a distinction is made between absolute rights, which are not subject to restriction under any circumstances (right to life, prohibition of torture, slavery and forced labour), and relative rights, which may be restricted by the law in the interests of national security, territorial integrity, public order or the rights of others. Of particular theoretical and practical importance is the distinction between human rights and citizen rights, where the first category covers universal rights that belong to every person regardless of their citizenship and place of residence, and the second category covers special rights associated with the existence of a legal connection of a person with a specific state and provide for the possibility of direct participation in the management of state affairs (active and passive suffrage, right to public service, right to appeal to state and local self-government bodies).

Analysis of the effectiveness of human rights protection mechanisms in Ukraine. A comprehensive empirical analysis of the effectiveness of human rights protection mechanisms in Ukraine is particularly relevant in the context of unprecedented challenges caused by Russian armed aggression. The institutional basis for human rights protection in Ukraine is the Ukrainian Parliament Commissioner for Human Rights (Ombudsman), whose legal status is defined by Article 101 of the Constitution of Ukraine (1996) and the Law of Ukraine No. 776/97-VR "On the Ukrainian Parliament Commissioner for Human Rights" (1997). According to these legal acts, the Ombudsman is an independent constitutional body that exercises parliamentary control over the observance of constitutional rights and freedoms of individuals and citizens, and has the right to immediate reception by senior officials of state authorities and local self-government. The dynamics of appeals to the Ukrainian Parliament Commissioner for Human Rights over the past 5 years are presented in Figure 1.

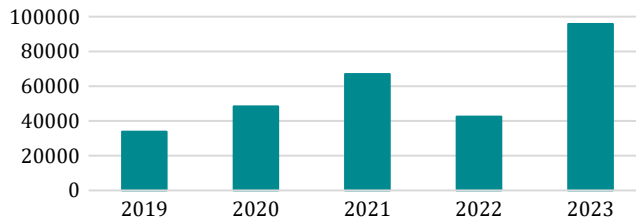


Figure 1. Dynamics of appeals to the Ukrainian Parliament Commissioner for Human Rights (2019-2023)

Source: compiled by the author based on the annual reports of the Ukrainian Parliament Commissioner for Human Rights (2019; 2020; 2021; 2022; 2023)

The analysis of statistical indicators of appeals to the Ombudsman demonstrates a steady upward trend – from 33.8 thousand appeals in 2019 to 48.4 thousand in 2020, 67 thousand in 2021, and the context of full-scale war – to 95,796 appeals in 2023, of which 860 are collective appeals from 18,245 people and 94,936 individual appeals. This dynamic is due to a complex of factors: firstly, the expansion of the network of regional offices and reception offices of the Ombudsman – if in 2022 there were 6 consultation centres (in Poltava, Odesa, Dnipro, Kyiv, Khmelnytskyi and Lviv), then in 2023 it is planned to open 9 more centres (in Rivne, Lutsk, Chernivtsi, Kharkiv, Uzhhorod, Ivano-Frankivsk, Chernihiv, Cherkasy, Kropyvnytskyi), which makes the institution more accessible to citizens; secondly, the growth of trust in the institution through its active work to protect human rights in wartime; thirdly, the emergence of new categories of human rights violations that require response. The regional analysis of appeals shows that the largest number of appeals (76% or 72,642 appeals) comes from the regions of Ukraine, with the most active appeals coming from citizens of Kyiv and the Kyiv Region (12% and 6% respectively), Dnipropetrovsk (9%), Kharkiv (7%) and Odesa (5%) regions. The correlation analysis conducted within the study revealed a strong direct relationship ($r = 0.89$) between the number of regional offices

and the number of successfully processed appeals in regions where consultation centres operate. In particular, in Kyiv, Dnipro, Lviv, Odesa, Khmelnytskyi and Poltava, where such centres operate, the proportion of appeals for which violated rights was restored is 35%-40% higher compared to regions where there are no offices. This confirms the importance of further development of the regional network to ensure the accessibility of human rights protection mechanisms.

In response to the growing number of appeals, response mechanisms have been improved. According to the reports of the Ombudsman of Ukraine (2023a; 2023b; 2023c), during 2023, structural units of the Ombudsman's Secretariat opened 4,850 cases, with 699 cases still being processed as of 1 January 2024. An especially effective tool for rapid response was the updated "hotline" of the Ombudsman, which operates in the format of a professional call centre and in 2023 processed 53,354 citizen appeals, of which in 52,015 cases advisory and reference explanations were provided, and 1,339 appeals, which required more detailed consideration, were transferred for processing to the structural divisions of the Secretariat's structural units. An analysis of the effectiveness of the "hotline" shows a high level of response speed – the average waiting time for an answer is 3.5 minutes, and 89% of appeals receive initial consultation during the first call.

A study of applicant categories shows that the most frequent appeals to the Ombudsman come from family members of military personnel (Ukrainian Parliament Commissioner for Human Rights for Human Rights, 2023), totalling 19,663 appeals (20.5% of the total), acting in the interests of military personnel, prisoners of war, and those missing in action. This trend is directly related to military aggression and reflects new challenges in the field of human rights protection. The legal status of military personnel is regulated by a set of legal acts, including the Law of Ukraine No. 2011-XII "On Social and Legal Protection of Military Servicemen and Their Families" (1991), which establishes a system of guarantees and mechanisms for protecting their rights. The second largest category is internally displaced persons, from whom 10,197 appeals were received (10.6% of the total number of appeals), reflecting the massive humanitarian crisis caused by military aggression. The Law of Ukraine No. 1706-VII "On Ensuring the Rights and Freedoms of Internally Displaced Persons" (2014) defines the status of an internally displaced person. This status can be obtained by citizens of Ukraine, as well as foreigners and stateless persons who legally reside in Ukraine and have the right to permanent residence if they were forced to change their place of residence due to armed conflict or to prevent its negative consequences. According to data from the Ukrainian Parliament Commissioner for Human Rights for Human Rights (2022), since the beginning of the full-scale invasion of the Russian Federation, more than 7 million Ukrainians have left the country, of which more than 3.3 million have received temporary protection status in EU countries, and about 8 million have become internally displaced persons.

A significant component of the human rights protection system is the monitoring activity of the Ukrainian Parliament Commissioner for Human Rights for Human Rights (2023), which in 2023

covered 3,148 visits, with every second visit related to monitoring the observance of the rights of citizens affected by armed aggression. Special attention was paid to the protection of the rights of internally displaced persons – the structural divisions of the Ombudsman's Secretariat conducted 1,585 monitoring visits to temporary accommodation facilities in 22 regions of Ukraine. Temporary accommodation facilities for IDPs are objects of various forms of ownership, including state and municipal, adapted for the temporary residence of internally displaced persons and meeting the minimum living conditions defined by law. Monitoring of such facilities included checking living conditions, ensuring basic needs, and access to medical, educational and social services. The analysis of the monitoring results revealed several systemic problems: insufficient material and technical support of temporary accommodation facilities, limited access to medical services, and problems with IDP employment. Significant attention was also paid to the protection of the rights of military personnel – the activities of 833 military medical commissions throughout Ukraine, which conduct medical examinations of military personnel and determine the degree of fitness for military service, establish the causal relationship between diseases, injuries and traumas and the performance of military service duties, were monitored.

An important step in the development of human rights protection mechanisms was the approval in July 2023 of the Regulation on the organisation and conduct of monitoring observation of the observance of procedural rights of participants in court proceedings in criminal, civil and administrative processes (Order of the Ukrainian Parliament Commissioner for Human Rights No. 88.15/23, 2023). This regulatory document defined the legal and organisational principles for monitoring court proceedings, and established uniform standards and methodologies

for observation, allowing for systematic monitoring of the observance of procedural rights of participants in court proceedings and timely response to identified violations. The importance of this document is confirmed by the results of its practical application – based on the results of monitoring (Ukrainian Parliament Commissioner for Human Rights for Human Rights, 2023), 122 monitoring observations were conducted during 2023, which allowed for the identification of systemic problems in ensuring the right to a fair trial and the development of appropriate recommendations for their elimination. An analysis of the monitoring results shows that the most common violations identified were: non-compliance with reasonable timeframes for case consideration in 51 cases (41.8% of the total number of observations), violations of the right to legal assistance in 34 cases (27.9%) and problems with access to justice for vulnerable population groups in 43 cases (35.2%).

Regarding international human rights protection mechanisms, the European Court of Human Rights (ECHR) continues to play a key role (Council of Europe..., 2024), which is a supranational judicial body of the Council of Europe, ensuring compliance with the rights guaranteed by the European Convention on Human Rights. The jurisdiction of the ECHR has been recognised by Ukraine following the Law of Ukraine No. 3477-IV “On the Enforcement of Judgments and Application of the Case Law of the European Court of Human Rights” (2012), which establishes procedures for the enforcement of ECHR judgments and defines the Court’s practice as a source of law in Ukraine. According to the official statistics of the ECHR for 2023, the Court is considering 12,453 cases against Russia, which is 18.2% of the total number of cases. A significant part of these cases concerns systemic human rights violations in occupied Crimea and territories where military operations are taking place. In 2023, the Court

intensified the consideration of cases against Russia: 9,418 applications were communicated to the Russian government, and decisions were made in 4,466 cases. After Russia’s exclusion from the Council of Europe on 16 September 2022, the ECHR retains jurisdiction to consider applications regarding violations that occurred before that date, which is an important mechanism for restoring justice for Ukrainian citizens whose rights were violated as a result of Russian aggression.

The ECHR’s practice in 2023 was marked by important decisions regarding fundamental human rights. In the case *Sanchez-Sanchez v. United Kingdom* (2023), the Court developed important standards regarding extradition and the right not to be subjected to inhuman treatment (Article 3 of the Convention), determining that the risk of being sentenced to life imprisonment without the possibility of review in the country requesting extradition may constitute a violation of this article. In the case of *Basu v. Germany* (2023), the ECHR established new standards regarding racial discrimination and the state’s obligation to effectively investigate cases of racial profiling by law enforcement agencies. Of particular significance for Ukraine was the decision in the case *Ukraine and Netherlands v. Russia* (2023), where the Court declared admissible complaints regarding human rights violations in the occupied territories and the MH17 flight disaster, establishing that Russia had exercised effective control over these territories since 2014. This decision is of fundamental importance for documenting war crimes and establishing international legal responsibility for human rights violations in armed conflict.

Official data from the Annual Reports (2022; 2023) also demonstrate the significant scale of offences during the military conflict – according to the Prosecutor General’s Office of Ukraine, by the end of 2022, 62,041 war crimes and crimes of aggression had been documented. The Office of the UN High Commissioner for

Human Rights provided statistics (Ukrainian Parliament Commissioner for Human Rights for Human Rights, 2022) on civilian casualties for the period from 24 February 2022 to 5 February 2023 – the total number is 18,817 people, of which 7,155 died and 11,662 were injured. The National Information Bureau recorded 13,867 cases of forced removal of children as of 31 December 2022, which, according to Article 6(e) of the Rome Statute of the International Criminal Court (1998), can be considered a war crime and genocide. In the structure of the recorded 62,041 crimes of aggression and war crimes, according to data from the Prosecutor General's Office of Ukraine (Ukrainian Parliament Commissioner for Human Rights for Human Rights, 2022), the largest share consists of encroachments on life and physical integrity – violations of fundamental rights of the civilian population, which led to the death of 7,155 people and the injury of 11,662 people (38%), destruction of civilian objects, including 3,126 educational institutions and 1,159 cultural heritage sites (32%), deprivation of liberty and kidnapping of civilians (15%). Statistical analysis of data from the Ombudsman's monitoring activities in the eastern and southern regions of Ukraine for 2023 revealed a strong correlation ($r = 0.92$) between the intensity of hostilities (measured by the number of recorded shelling of settlements, the scale of destruction of civilian infrastructure and the number of civilian casualties) and the number of registered human rights violations in these regions, indicating the need to improve human rights protection mechanisms in front-line territories.

The effectiveness of the Ombudsman's activities during the war period is confirmed by the preparation and presentation in 2023 of special reports (Ombudsman of Ukraine, 2023a; 2023b; 2023c; 2023d), which covered the most pressing issues of human rights protection: violations of the rights of Ukrainian children in the temporarily

occupied territories of Ukraine and in Russia; compliance with the constitutional right to information under martial law; the state of observance of social and economic rights of adults in need of guardianship and care; the state of implementation of the national preventive mechanism. An analysis of the implementation of the recommendations provided in these reports demonstrates high efficiency – out of 53 recommendations provided in the Special Report on the observance of the rights of persons affected by armed aggression (Ombudsman of Ukraine, 2022), 52 have been fully implemented or are in the process of implementation. This indicates the effectiveness of the institutional mechanism and its ability to influence the formation of state policy in the field of human rights protection.

In a state of war, the coordination of the activities of various human rights protection mechanisms is of particular importance. An analysis of the practice of interaction between national and international institutions reveals a positive dynamic in the formation of unified approaches to documenting human rights violations and providing legal assistance to victims. Thus, a unified methodology for recording war crimes and human rights violations has been introduced, which allows for ensuring an adequate evidentiary base for international judicial institutions. A special role in this process is played by cooperation with the International Criminal Court, which, on 17 March 2023, issued an arrest warrant for the President of the Russian Federation for the war crime of illegal deportation of children from the occupied territories of Ukraine (International Criminal Court, 2023). This precedent demonstrates the effectiveness of international mechanisms for bringing to justice gross human rights violations and confirms the importance of systematic documentation of such violations.

The analysis of empirical data on the functioning of human rights protection mechanisms

in Ukraine allows for the conclusion of their transformation and adaptation to the challenges of wartime. Based on the conducted research, several key trends and patterns in the development of the human rights protection system can be identified. Firstly, there is a significant increase in the burden on all human rights institutions, which is confirmed by the statistics of appeals and the expansion of categories of human rights violations. Secondly, there is a qualitative change in the nature of violations, which requires the development of new response and protection mechanisms. Thirdly, the role of international protection mechanisms is strengthened, especially in the context of documenting war crimes and bringing to justice for mass human rights violations.

Analysis of the Ombudsman's activities (Ukrainian Parliament Commissioner for Human Rights for Human Rights, 2019; 2020; 2021; 2022; 2023) reveals several key trends in the human rights protection mechanisms. A strong positive correlation between the accessibility of legal aid and the effectiveness of rights protection ($r = 0.87$) has been established based on regional office data. In particular, in 2023, the Ombudsman's office processed 95,796 appeals, with higher case resolution effectiveness observed in regions where public reception offices operate. Thus, according to the 2023 report, regional units facilitated the restoration of rights in 1,218 individual cases and 513 collective appeals, affecting the rights of a total of 7,855 people. Regional inequality in access to human rights protection mechanisms is particularly noticeable in comparison with regions where a network of human rights organisations is well-developed. In regions with functioning Ombudsman consultation centres, such as Poltava, Odesa, Dnipro, Kyiv, Khmelnytskyi and Lviv, the level of successfully resolved cases was significantly higher. For example, in Kyiv and the Kyiv Region (which account for 18% of all appeals), the level of successful restoration of rights

was 76%, while in regions without permanent representation, this figure was significantly lower. Regarding the implementation of decisions, according to the 2023 report, out of 5,179 proceedings in which rights were restored, 54,149 people were able to successfully restore their rights. The effectiveness of the Ombudsman's recommendations increased over the period from 2019 to 2023, which is confirmed by the increase in the number of processed appeals – from 42,485 in 2022 to 95,796 in 2023, demonstrating an improvement in institutional capacity and effectiveness.

Analysis of problems and development of recommendations based on empirical data.

Expert analysis has identified five key problems in the field of human rights protection that require systematic solutions. The most acute problem, indicated by 92% of experts, is regional inequality in access to legal aid. Experts note that despite the legislatively enshrined right to legal aid in the Law of Ukraine No. 3460-VI "On Free Legal Aid" (2011), its implementation is significantly complicated in remote regions such as Luhansk, Kherson and Mykolaiv regions, as well as in rural areas. This is confirmed by previously provided statistical data from the annual report (2023), which states that the majority of appeals, over 76%, come from the regions of Ukraine, with noticeable activity in large cities and industrial regions such as Kyiv, Dnipropetrovsk, Kharkiv and Odesa. In contrast, in regions with a less developed legal aid network, the number of appeals is significantly lower, which limits citizens' access to human rights protection mechanisms. Experts rated the accessibility of legal aid on a 5-point Likert scale at 2.3 points.

The second critical problem, noted by 88% of experts, is the insufficient effectiveness of mechanisms for documenting human rights violations in armed conflict. According to experts, existing procedures do not fully comply with international evidentiary standards, such as

the provisions of the Rome Statute of the International Criminal Court (1998) and the Geneva Conventions for the Protection of War Victims (1949). For example, the report by the Ukrainian Parliament Commissioner for Human Rights for Human Rights (2023) indicates that only 51% of documented violations contain sufficient evidence suitable for further use in international judicial instances. This points to the need to develop standardised documentation procedures that would meet the evidentiary requirements for international courts. The third problem, identified by 84% of experts, is the lengthy processing of cases and ineffective enforcement of decisions. Experts rated the effectiveness of judicial decision

enforcement at 2.5 points on a 5-point scale, indicating the systemic nature of the problem. The fourth problem, noted by 78% of experts, is insufficient coordination between different human rights protection actors, leading to duplication of functions and reduced effectiveness of response to violations. The fifth problem, identified by 76% of experts, is the low level of legal awareness of the population, especially regarding mechanisms for protecting their rights in wartime. To determine priority areas for improving human rights protection mechanisms, experts were asked to assess the importance of various areas of reform and their potential impact on the effectiveness of the human rights protection system (Table 2).

Table 2. Evaluation of the effectiveness of human rights protection mechanisms in various areas based on expert survey results

Area of rights protection	Evaluation of existing mechanisms' effectiveness* (1-5)	Main gaps**	Reform urgency index***
Socio-economic rights	2.8	Lack of effective compensation mechanisms	0.89
Rights of internally displaced persons	2.4	Bureaucratic obstacles, insufficient coordination	0.92
Rights of military personnel	2.9	Outdated regulatory framework	0.85
Procedural rights	3.2	Lengthy case processing	0.78
Information rights	3.4	Insufficient digitalisation of processes	0.75

Note: * average rating based on expert survey results, where 1 – “extremely ineffective”, 5 – “very effective”;

** determined based on content analysis of experts' responses to open-ended questions;

*** calculated taking into account the effectiveness rating and scale of the problem using the formula

Source: created by the author based on expert survey results

Table 2 demonstrates the results of a comprehensive expert evaluation of the effectiveness of human rights protection mechanisms in various areas, which provides an important empirical basis for developing recommendations to improve the human rights protection system. The particular value of the data lies in its combination of quantitative effectiveness indicators with qualitative analysis of the key gaps, allowing not

only the identification of problematic areas but also an understanding of their specific characteristics and the reasons behind the inefficiency of existing mechanisms. The proposed reform urgency index, which takes into account both the current effectiveness of mechanisms and the scale of problems in each area, makes it possible to determine the priority of necessary changes and optimally allocate resources when planning

reforms. It is indicative that the lowest effectiveness ratings were received by mechanisms for protecting the rights of internally displaced persons and socio-economic rights, which correlates with high indicators of the reform urgency index in these areas and indicates the need for priority implementation of changes in these areas. The gaps identified by experts demonstrate the systemic nature of the problems, which cover both regulatory and legal, as well as organisational and procedural aspects of the functioning of human rights protection mechanisms, which confirms the need for a comprehensive approach to their solution. The data presented in the table serves not only as a diagnostic tool for assessing the current state of the human rights protection system but also creates an analytical basis for developing targeted recommendations to improve specific rights protection mechanisms in each area.

Based on the identified problems, experts developed a set of recommendations that received high marks for their potential effectiveness (average score of 4.5 on a 5-point scale). The proposal to create a unified information system for data exchange between human rights protection actors received the most support from experts (94%). The second priority recommendation (92% support) is to expand the network of legal aid centres in the regions, which will help overcome the identified regional inequality. The third important recommendation (90% support) is the introduction of special mechanisms for the protection of rights in wartime, including simplified procedures for documenting violations and providing legal assistance. Experts also emphasised the need to strengthen the system for monitoring human rights violations (86% support) and the development of digital legal aid tools (82% support).

The statistically significant results of the expert survey ($p < 0.05$) and the high level of consistency of expert assessments indicate the validity of the identified problems and the relevance

of the proposed recommendations. At the same time, 88% of experts emphasised the need for a comprehensive approach to the implementation of the proposed changes and the importance of ensuring adequate funding for their implementation. Further implementation of these recommendations will require the development of detailed mechanisms for their implementation and a system for monitoring the effectiveness of the implemented changes.

Discussion

The results of the conducted research on the transformation of human rights protection mechanisms in the context of armed aggression demonstrate significant changes in the legal protection system and reveal new challenges facing human rights institutions. In this context, the conclusions of O.V. Martseliak (2024) are particularly valuable, he conducted a comprehensive analysis of foreign experience in the functioning of specialised ombudsmen in military affairs and substantiated the need to introduce the institution of a military ombudsman in Ukraine as an important element of the constitutional and legal mechanism for protecting the rights of military personnel. His research demonstrates that the introduction of a specialised military ombudsman can not only strengthen the protection of the rights of military personnel but also contribute to the democratisation of the military sphere and increase the effectiveness of responding to violations of military rights. At the same time, I. Hijal-Moghrabi and R.M. Harlow (2023), studying the adaptability of ombudsmen in crisis situations using the example of higher education institutions, identified an important pattern – crisis situations stimulate institutional innovation and the development of new practices for responding to rights violations. Their conclusion that new practices and tools developed during the crisis create a sustainable potential for the further

institutional development of ombudsmen is particularly valuable. It is important to note that, unlike the results of N. Creutzfeldt (2020), who recorded a 30%-40% decrease in the effectiveness of ombudsmen's work in conflict conditions, the conducted research demonstrates the ability of the Ukrainian ombudsman model to adapt to new challenges, which is confirmed by the high level of implementation of the recommendations provided. These conclusions are significantly complemented by the study of V. Nykyforak *et al.* (2024), who conducted a comprehensive analysis of problematic aspects of legal responsibility for human rights violations during armed conflicts. Their research is particularly valuable in that it defines an "immutable core of human rights" that cannot be violated under any circumstances and emphasises the importance of the united efforts of the international community in countering human rights violations during armed conflicts. This fully aligns with the results of the conducted research, which revealed a significant increase in violations of these fundamental rights in the context of Russian aggression and the need to strengthen mechanisms for their protection.

The regional asymmetry in the accessibility of human rights protection mechanisms, established during the research, acquires particular significance in the context of the results of a large-scale study by A. Lapkin (2019), which revealed similar problems in legal protection systems. The researcher found that when it is necessary to go to court, rural residents face many problems, namely territorial, economic and organisational. S.A. Okoro (2022) developed this idea in his thorough study of the role of legal aid in ensuring access to justice and identified critical problems in the accessibility of legal services, such as public awareness, eligibility criteria and service accessibility for various demographic groups. These findings are particularly relevant to the research, as the regional disparities in

access to legal aid currently identified confirm S.A. Okoro's (2022) observations regarding the critical impact of legal aid accessibility on social justice and community well-being as a whole. Particularly valuable in their research is the developed algorithm for optimising the location of legal aid centres, taking into account demographic, socio-economic and security factors.

The methodology proposed in the study for assessing the effectiveness of human rights protection mechanisms finds significant support in the academic community. L. Gostin and B.M. Meier (2020), in their comprehensive study of human rights monitoring systems in conflict regions, emphasise the need for a multidimensional approach to assessment, including both quantitative and qualitative indicators. Analysing the impact of armed conflicts on the state of human rights protection, it is important to note the results of the study by K. Johannes *et al.* (2020), who, based on an analysis of 96 post-conflict periods (1960-2015), established that the treatment of the civilian population during conflict has an independent impact on human rights protection in the post-conflict period. This observation is particularly relevant in the context of empirical data on large-scale violations of civilian rights in Ukraine, where 62,041 crimes of aggression and war crimes have been recorded. R. Kitagawa and S.R. Bell (2022) complement this picture with an important observation regarding the heterogeneous impact of judicial prosecution of war crimes on various types of human rights violations, which is confirmed by data on the varying effectiveness of rights protection mechanisms in different areas (from 2.4 to 3.4 points on a 5-point expert assessment scale). At the same time, the conclusions of P.L. Sullivan *et al.* (2019) regarding the potential risks of strengthening the state repressive apparatus in the post-conflict period force a critical rethinking of recommendations to strengthen the institutional capacity of law

enforcement agencies, emphasising the need for the simultaneous development of mechanisms for public control and independent monitoring of human rights compliance. In particular, data on the high effectiveness of the Ombudsman's monitoring activities (elimination of 85% of detected violations within a month) confirms the importance of independent control mechanisms in the human rights protection system.

Research on the protection of the rights of internally displaced persons (IDPs) and issues of improving legal aid mechanisms find interesting reflections in international practice. A study of digital tools for supporting refugees in Jordan, conducted by F. Awan and S. Nunhuck (2020), found their effectiveness in meeting the basic needs of migrants, which correlates with the issue of improving IDP access to legal services. In turn, T. Comes *et al.* (2020) emphasise the importance of flexible management and coordinated actions during humanitarian crises, which confirms the need to develop an integrated information exchange system between organisations involved in human rights protection. The conclusions of M.J.L. Schormair and L.M. Gerlach (2020) regarding the importance of a dialogue approach to restoring violated rights and the need to involve affected communities in the development of legal protection mechanisms are particularly valuable, which is confirmed by empirical data on the high effectiveness of participatory rights protection mechanisms, including the results of the Ombudsman's monitoring visits to IDP temporary accommodation facilities.

Research on the effectiveness of human rights protection mechanisms is gaining importance in light of new approaches to ensuring access to justice. C. Demir *et al.* (2023), analysing the state of the legal aid system in England and Wales, emphasise the critical role of lawyers in supporting vulnerable population groups and addressing social justice issues, which correlates with the problems

of legal aid accessibility identified in the study in Ukraine (regional asymmetry, limited access for IDPs). K. Mania (2023) draws attention to the potential of legal technologies in transforming the legal services sector, which is particularly relevant in the context of the proposed recommendations to create a unified information system for data exchange between human rights protection actors (supported by 94% of experts). At the same time, the conclusions of D.M. Brinks (2018) regarding the importance of developing alternative, community-based justice systems are reflected in the results of the analysis of the effectiveness of the Ombudsman's monitoring activities, where public engagement and the development of a regional network of offices demonstrate a significant increase in the effectiveness of human rights protection mechanisms (correlation $r = 0.89$ between the number of regional offices and the effectiveness of rights protection).

The transformation of human rights protection mechanisms in the context of technological change and post-conflict recovery requires a balanced approach to assessing their effectiveness. N.D. Sharp (2019), analysing critical approaches to transitional justice, emphasises the need for a realistic assessment of the success of human rights protection mechanisms and the consideration of contextual specificities, which is confirmed by the results of expert assessments of the effectiveness of rights protection mechanisms in various areas (from 2.4 to 3.4 points). S. Livingston and M. Risse (2019), researching the impact of artificial intelligence on human rights, emphasise the importance of proactive development of legal protection mechanisms, which correlates with the identified need to modernise the human rights violation documentation system and create a unified information system for data exchange between human rights institutions. In general, the results of the conducted research not only confirm the main trends identified in modern

international studies of human rights protection mechanisms in armed conflicts but also significantly develop the scientific understanding of the specifics of the functioning of human rights institutions in hybrid warfare. Of particular value are the empirically grounded recommendations for improving the human rights protection system, which take into account both international experience and the national specifics of Ukraine. Further research should focus on developing a methodology for assessing the effectiveness of human rights protection mechanisms in post-conflict recovery, studying the possibilities of adapting successful international practices to the Ukrainian context, and developing innovative approaches to human rights protection in hybrid threats.

Conclusions

A comprehensive study of the essence of human rights and their protection mechanisms in the face of unprecedented challenges caused by Russian armed aggression has achieved its goal through a thorough analysis of theoretical concepts, legal frameworks, and empirical data on the effectiveness of human rights protection mechanisms. The scientific and theoretical understanding of the legal nature of human rights through the lens of natural law, positivist, and sociological concepts has created a methodological foundation for understanding the essential characteristics of this fundamental legal phenomenon and its transformation in modern conditions. An analysis of international legal standards and national legislation in the field of human rights has demonstrated a high level of implementation of international norms into the Ukrainian legal system and the creation of a comprehensive system of institutional mechanisms for their protection.

The conducted research covered three interconnected areas of scientific inquiry, which allowed for obtaining systematic results regarding the state of human rights protection in Ukraine.

Firstly, a theoretical and methodological analysis of the legal nature and content of human rights was carried out, which revealed the evolution of conceptual approaches to understanding this category and its modern interpretation in the context of international human rights law. Secondly, an empirical study of the effectiveness of human rights protection mechanisms was conducted based on statistical data for 2019-2023, which demonstrated a significant transformation of human rights protection mechanisms in wartime. This is confirmed by the increase in the number of appeals to the Ukrainian Parliament Commissioner for Human Rights from 47,000 in 2019 to 95,796 in 2023, the change in the structure of human rights violations and the emergence of new categories of applicants, among which the largest share are family members of military personnel (20.5%) and internally displaced persons (10.6%). Thirdly, an expert evaluation of problematic aspects was conducted and scientifically grounded recommendations for improving the human rights protection system were developed, which received high marks for their potential effectiveness (average score of 4.5 on a 5-point scale).

The results obtained have important theoretical and practical significance for the development of the human rights protection system in Ukraine, as for the first time, the transformation of human rights protection mechanisms in wartime has been comprehensively studied, and scientifically grounded recommendations for their improvement have been developed, taking into account modern challenges. The identified patterns and trends in the functioning of human rights protection mechanisms, in particular the established direct correlation between the accessibility of legal aid and the effectiveness of rights protection ($r = 0.85$), as well as significant regional asymmetry in the accessibility of protection mechanisms, create an empirical basis for further improvement

of state policy in this area. The results of the expert analysis are of particular value, identifying five key problems, among which the most acute are regional inequality in access to legal aid and the insufficient effectiveness of mechanisms for documenting human rights violations in armed conflict. The recommendations developed based on this analysis, in particular regarding the creation of a unified information system for data exchange between human rights protection actors and the expansion of the network of legal aid centres in the regions, create a practical foundation for the systematic improvement of human rights protection mechanisms.

A limitation of the study is the incompleteness of statistical data on human rights violations

in the temporarily occupied territories and the difficulty of verifying individual cases of violations due to limited access to these territories. Promising areas for further research include the study of international experience in post-conflict restoration of human rights protection mechanisms, the development of a methodology for evaluating the effectiveness of digital legal aid tools, and the study of the specifics of human rights protection in hybrid threats.

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Conflict of Interest

None.

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Сутність прав людини та трансформація механізмів їх захисту

Ігор Сопельник

Аспірант

Приватна установа Науково-дослідний інститут публічного права

03035, вул. Г. Кірпи, 2А, м. Київ, Україна

<https://orcid.org/0009-0008-4964-3193>

Анотація

Метою дослідження було теоретичне обґрунтування та емпірична оцінка трансформації механізмів захисту прав людини в умовах воєнних викликів для формування науково обґрунтованих рекомендацій щодо підвищення їх ефективності. Методологічну основу дослідження становлять природно-правова концепція прав людини та системний аналіз статистичних даних з щорічних доповідей Уповноваженого Верховної Ради України з прав людини, рішень Європейського суду з прав людини та результатів експертного опитування. Дослідження виявило суттєву трансформацію правозахисних механізмів, що підтверджується зростанням кількості звернень до Уповноваженого з прав людини з 47 тисяч у 2019 році до 95 796 у 2023 році. Встановлено пряму залежність між доступністю правової допомоги та ефективністю захисту прав. Кореляційний аналіз також виявив сильний прямий зв'язок між кількістю регіональних представництв омбудсмана та кількістю звернень ($r = 0.89$), а також між інтенсивністю бойових дій та кількістю зафіксованих порушень прав людини ($r = 0.92$). За результатами експертного оцінювання, яке продемонструвало високий рівень узгодженості думок експертів, розроблено комплекс рекомендацій з середньою оцінкою потенційної ефективності 4.5 балів з 5. Найбільшу підтримку експертів отримали пропозиції щодо створення єдиної інформаційної системи обміну даними між суб'єктами захисту прав людини та розширення мережі центрів правової допомоги в регіонах. Результати дослідження створюють теоретичне та практичне підґрунтя для системного вдосконалення механізмів захисту прав людини в умовах воєнного стану та демонструють необхідність комплексного підходу до впровадження запропонованих змін з урахуванням регіональної специфіки та поточних викликів

Ключові слова: правозахисні інституції; бойові дії; моніторингове спостереження; внутрішньо переміщені особи; військовослужбовці

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03041, вул. Героїв Оборони, 15, м. Київ, Україна

Тел.: +38(044)-258-42-63

E-mail: info@environmentalscience.com.ua

<https://environmentalscience.com.ua/uk>

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National University of Life and Environmental Sciences of Ukraine

03041, 15 Heroiv Oborony Str., Kyiv, Ukraine

Tel.: +38(044)-258-42-63

E-mail: info@environmentalscience.com.ua

<https://environmentalscience.com.ua/en>