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Food sovereignty: Balancing economic security and the right to a clean environment

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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 Specifically, the lack of mandatory environmental criteria for granting subsidies creates conditions for the use of outdated and environmentally harmful farming methods.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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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 (Lepyage, 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

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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