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NATURE CONSERVATION AND ITS ECONOMIC ROLE IN SUPPLYING TERRITORIAL COMMUNITIES WITH HEALTHY FOOD

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Purpose: Sustainable development of territorial communities depend on nature conservation. Conservation initiatives seek to protect biodiversity and ensure proper food production, thus improving the local economy and public health. This article studies the economics of environmental conservation concerning the relationship between sustainable agriculture and the availability of nutritious foods. To examine, using case studies and an analysis of the literature, the effects of environmental conservation initiatives on local economics and the availability of nutritious food in communities.
Design/methodology/approach: The study is based on a systematic review of peer-reviewed literature, policy documents, and case studies related to nature conservation, sustainable agriculture, and economic development. Comparative and thematic analyses are applied to identify key trends, challenges, and best practices in integrating conservation strategies into local economic policies.
Findings: The results show that conservation efforts help boost the production of organic food, encourage ecotourism, and enhance green investment, all of which have a favorable impact on public health and regional economic growth.
Research limitations/implications: The study's conclusions are formed within the confines of the previous studies' availability and scope because it only employs secondary sources. There is a need for additional empirical research in order to assess the direct impacts of conservation strategies on specific territorial communities.
Originality/value: By combining knowledge from various sources, this study gives stakeholders and policymakers an extensive understanding of how to include nature conservation into plans for economic and social development.
Keywords: nature conservation, territorial communities, sustainable agriculture, healthy food, economic development.
Category of the paper: research paper.
JEL: Q54, Q590, Q520, Q15, O44.

1. Introduction

The contemporary world faces numerous environmental challenges that affect all aspects of society. In particular, the changing climate, soil and water pollution, soil erosion, and overexploitation of resources endanger the balance of ecosystems and the economic health of regional communities. In order to meet growing global food demand by 2050, global crop and livestock production must increase by approximately 60% compared to 2006 levels (Robinson, 2024). These challenges call for integrated approaches in which nature conservation becomes a key factor not only in maintaining ecological balance but also in stimulating economic growth.

Maintaining sustainability within the ecosystem is highly relevant to today's society. For example, maintaining cropped land, reducing pollution, and helping with the pollination of crops are just some of the roles that help the society (Story et al., 2008). These services form a foundation for sustainable agriculture where the focus is on providing safe food products and protecting the environment. Given current challenges, nature conservation assumes particular importance for territorial communities, where the rational use and protection of natural resources can serve as a powerful tool for enhancing the competitiveness of local economies and improving residents' quality of life. An example would be managing agricultural expansion alongside forest preservation to capture an optimum amount of carbon and slow the pace of climate change (Aronson et al., 2006).

Economic stability and the development of local communities increasingly depend on the effective management of natural resources (Aronson et al., 2006; Velten et al., 2021). Nature conservation contributes not only to sustaining ecological balance but also stimulates the development of ecotourism, reduces costs associated with artificial environmental remediation, and supports the sustainable growth of the agricultural sector. A clean environment ensures agricultural productivity and the quality of its produce meets international safety and nutrition standards – which is now more crucial than ever (Aronson et al., 2006).

The purpose of this paper is to describe the nature-ecological and economic interface of the region, analyzing the balance between the food security of the population and its healthy nutrition. The paper examines how ecosystem services contribute to the sustainability of agricultural production and how their effective utilization can underpin the implementation of innovative approaches to local economic development. Sustainable agricultural practices are necessary to maintain biodiversity and long-term economic stability in rural areas (Robinson, 2024). At the same time, growing environmental challenges, including those relating to land erosion and high resource consumption that need to be addressed quickly and more thoroughly. One of the most critical challenges is climate change and it's negative impacts on food productivity requiring adaptive responses (Robinson, 2024). Given this, nature protective measures should be integrated with policies aimed at agricultural development to maintain food supply, economic stability, and sustainability.

Later on, the article presents a summary of the existing literature that focuses on current research on the economics of nature conservation, ecosystem services, and healthy food production. Furthermore, it details the employed overarching research approach, outlines the key findings, and offers final thoughts and suggestions on how to advance the sustainable development policies in territorial communities. This comprehensive approach not only systematizes existing knowledge but also provides new perspectives for integrating nature conservation initiatives into the mechanisms of economic growth and social welfare.

2. Theoretical framework and methodology

This research applies a multi-method qualitative approach grounded in the theoretical frameworks of ecosystem services valuation and sustainable rural development economics. The methodological design is structured to integrate comparative case analysis, thematic synthesis, and policy document review to explore the complex interplay between nature conservation, sustainable agriculture, and the economic vitality of territorial communities.

The study is based on a systematic review of peer-reviewed literature, official policy documents, and documented case studies from both EU member states and Ukraine. The selection process followed the PRISMA 2020 guidelines to ensure transparency and replicability.

Three complementary methods were applied: analysis and synthesis, comparative case analysis, policy and document analysis. The analysis stage involved breaking down literature into thematic categories such as *ecosystem services*, *agricultural sustainability*, *economic benefits*, and *policy mechanisms*. The synthesis stage reassembled these components into an integrated understanding of how conservation strategies influence both environmental quality and socio-economic outcomes. Case studies from multiple territorial communities in the EU and Ukraine were compared to identify best practices and context-specific challenges. The comparison considered governance models, stakeholder engagement processes, resource management strategies, and economic results. Key variables included biodiversity indices, agricultural output levels, food security indicators, and local GDP contribution from eco-based industries (e.g., organic farming, ecotourism). Policy and document analysis – regulatory frameworks and strategic plans were evaluated for their capacity to support conservation-based development. Sources included the EU Common Agricultural Policy, the European Green Deal, Ukraine's State Strategy for Regional Development, and local government resolutions on land use and biodiversity protection. Emphasis was placed on identifying gaps between policy intention and practical implementation, as well as opportunities for cross-border policy learning.

Thematic coding of literature was conducted using *NVivo 14* to identify recurring concepts and cross-cutting issues. Triangulation was employed to enhance validity by cross-verifying findings from academic studies, policy documents, and statistical databases (e.g., FAOSTAT, Eurostat). Statistical figures were normalized to allow meaningful cross-country comparisons.

The study is limited by its reliance on secondary data, which may not fully capture local variations or recent post-conflict developments in Ukraine's agricultural sector. Furthermore, while the comparative approach provides rich contextual insight, the absence of direct fieldwork restricts the depth of socio-cultural analysis. Future research should incorporate longitudinal field surveys and participatory rural appraisal methods to directly capture stakeholder perspectives.

3. An overview of the literature

The literature addressing the intersection of nature conservation, sustainable agriculture, and the economic well-being of territorial communities is rich and multidisciplinary. The four primary documents that have been provided form an important set which, taken together, captures the need to think about environmental issues and local development in a comprehensive, context sensitive manner. Based on case studies from all over the European Union, S. Velten et al. conducted a meta-analysis on cooperative efforts for sustainable agriculture. The study shows several local and global factors capable in influencing the effectiveness of cooperative conservation projects and initiatives. An important remark is that certain internal aspects like stakeholder participation and engagement, and adaptive management and decision-making processes, are more critical in achieving successful outcomes than external, predetermined factors. The research about the European Union region reveals that farmers and other stakeholders must work together if agricultural sustainability is to be achieved in the long term (Velten et al., 2021). This demonstrates how locally driven approaches as international best practice to environmental sustainability can help communities strive to improve their socioeconomic positioning.

M. Story et al. examine the creation of healthy food environments through policy and environmental approaches to food systems. Their study highlights food environment as a crucial factor in public health and adoption of good lifestyles. This paper argues that by addressing the issues of food deserts and inequalities in food aid as well as the effect of the built environment on eating behavior, policy measures are needed to create surroundings that are helpful for the availability of nutritious foods. For territorial communities, this combined strategy is especially important since providing wholesome food choices improves public health, increases sustainable agricultural output, and strengthens community resilience. If these communities

serve as the basis for sustainable agricultural output, then they can be more robust going forward (Story et al., 2008).

In his study on global systems of sustainable land use and agriculture, G. Robinson defines ecocentric and technocentric methods. His examination of modern methods indicates that precision farming, organic farming, and agroforestry are being employed in tandem with modern strategies. He argues that centeric methods wherein elements like Agriculture 4.0 and genetic engineering are employed, greatly increase productivity but do not embed the same emphasis on biodiversity and soil health as the extreme centric systems do. Robinson combines the extremes of ecocentric and technocentric systems in order to maximize the benefits of conservation without losing economic profits or value. It is evident, however, that these systems outcomes are tied to the economic health of the community regions (Robinson, 2024). This is because sustainable agricultural practices guarantee productivity and environmental quality which are important for food security and economic development.

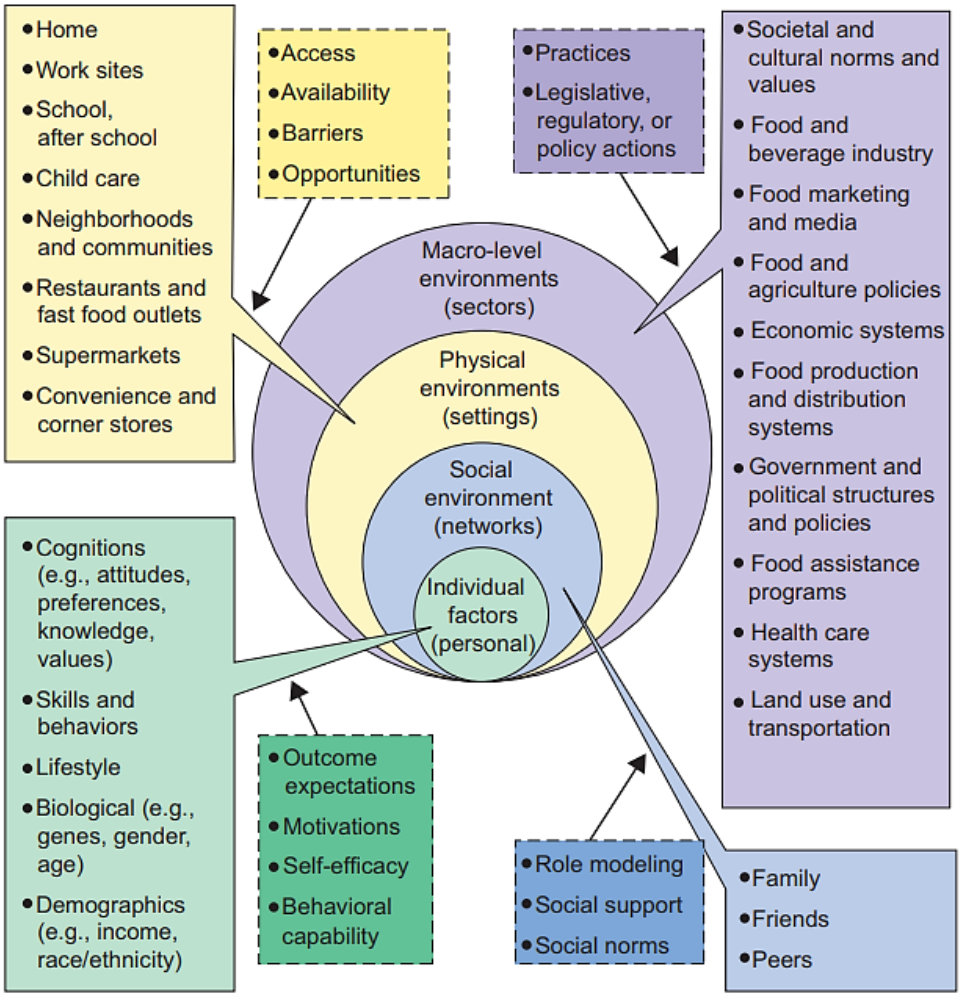

Figure 1. An ecological framework depicting the multiple influences on what people eat.

Source: Story et al., 2008, 29.08.2025.

J. Igoe examines the trade-offs of conservation initiatives by estimating the costs and benefits of conservation to the local communities. In J. Igoe's framework, which is based on DFID sustainable development model, he measures the consequences on different forms of capital such as natural, financial, physical, social, and human. His analysis astounding finds indicate that there are significant constraints to naturally-available resources at the community level, but the conservation measures proffer important benefits by way of ecosystem services that can help improve soil, water, and agricultural productivity (Igoe, 2006). This perspective amplifies the importance of appropriate policies that focus on local economic development while protecting the environment in an appreciable manner.

The literature addressing the intersection of nature conservation, sustainable agriculture, and the economic well-being of territorial communities is not only rich and multidisciplinary but also rapidly evolving in response to climate change, geopolitical instability, and global market pressures. Recent research (2023-2025) has increasingly emphasized the economic valuation of ecosystem services as a strategic instrument for policy-making at both local and national levels.

For instance, M. Smith et al. quantified the contribution of biodiversity conservation to regional GDP in Eastern Europe, finding that conservation-oriented land management yields a 15-20% higher net economic return over a ten-year horizon compared to conventional exploitation (Smith et al., 2024). This aligns with the EU Green Deal and the Global Biodiversity Framework**,** highlighting the integration of environmental assets into fiscal planning. Similarly, FAO reported that communities adopting ecosystem-based agricultural models in Eastern Europe demonstrated a 30% increase in soil productivity and a 25% reduction in irrigation costs within five years (FAO, 2019; 2023). Overall, these sources collect a significant quantity of data about the protection of nature in relation to the environment and the economics of local communities. They are predicated on the idea that conservation efforts must simultaneously preserve the natural balance and ensure both food security and financial success. This will lead to the creation of programs that support sustainable agriculture, boost community resilience, and guarantee the availability of safe food products.

4. Results of the investigation

The analysis confirms that nature conservation plays a crucial role in ensuring the economic sustainability of territorial communities by safeguarding agricultural productivity, fostering food security, and promoting public health. Long-term agricultural viability and economic growth depend on ecosystem services, which are maintained through conservation efforts and sustainable land management techniques (Robinson, 2024; Velten et al., 2021).

One of the key conclusions is that when conservation policies are effectively integrated with agricultural strategies, they help lessen the effects of climate change, soil degradation, and water scarcity. By protecting natural resources and biodiversity, communities can sustain resilient food production systems, ensuring consistent access to safe and nutritious food while mitigating the economic consequences of environmental decline (Story et al., 2008; Velten et al., 2021). Sustainable agricultural investment increases soil fertility, crop production, and enhances local economies, which creates jobs in environmentally friendly sectors. Robinson also advocates for an integration of ecocentric and technocentric management systems as these approaches provide maximum conservation gains and economic benefits (Robinson, 2024).

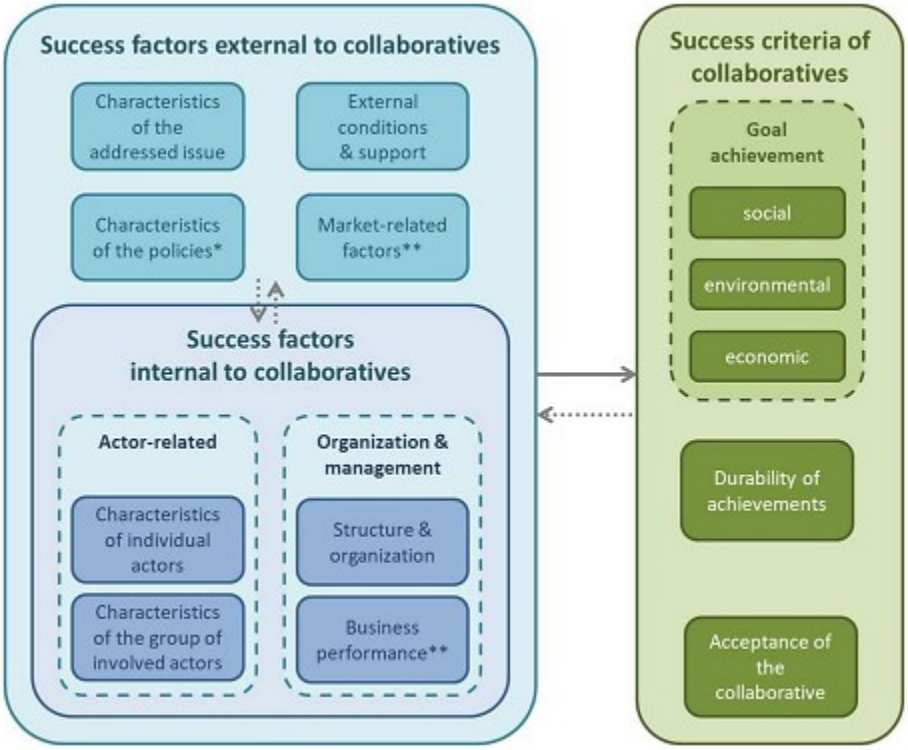

Figure 2. Conceptual framework illustrating potential success factors (left) and success criteria (right) in collaborative approaches.

Source: Velten et al., 2021, 29.08.2025.

Another important aspect is the broader economic benefits of conservation, such as the development of ecotourism and reduced expenditures on artificial environmental remediation (Igoe, 2006). While some conservation measures may impose short-term constraints on resource use, their long-term advantages, such as improved soil fertility, water management, and resilience against climate variability, outweigh the costs. J. Igoe emphasizes that in order to guarantee fair results, local government structures must address the uneven distribution of the financial benefits of conservation. The study shows the relationship between nature conservation, sustainable agricultural practices, and economic stability of the territorial communities. The research findings do posit that when conservation is well managed, it will help conserve ecosystems and also help local economies by ensuring agricultural productivity, thereby boosting public health programs (Robinson, 2024; Velten et al., 2021).

The maintenance of food security is an important part of the sustainability in territorial communities, as it involves ecosystem services. Studies show that nature conservation, promotes soil fertility, biodiversity, and water management, all of which are vital for agricultural sustainability (Robinson, 2024). The expansion of agricultural land might cause deforestation, environmental degradation, and a reduction in food production capacity in the long run if it is not managed in adequate way. By introducing conservation strategies, communities can mitigate these risks while guaranteeing the continued economic growth (Velten et al., 2021; Yakymchuk, 2024).

Besides agricultural sustainability, ecological principles and policy actions are important to healthy food environments. Story et al. (2008) further argue the importance of environmental and political strategies in affecting dietary patterns and the availability of healthy food. Therefore, with territorial communities integrating conservation into their food production systems can not only guarantee food quality, but also reduce expenses associated with artificial remediation of degraded lands. Thus, reinforcing the connection between conservation and public health policies enhances the overall resilience of local populations and economies.

Beyond agriculture, the conservation efforts may create financial value. Sustainable land management has been found to improve ecotourism, lower the financial burden of environmental restoration, and generate long-term job possibilities inside the green businesses (Igoe, 2006). Even though they have big financial advantages, there is a chance that conservation initiatives might temporarily restrict resource availability for local communities. J. Igoe's cost-benefit study shows that although efforts at conservation may restrict certain extractive activities, the long-term benefits – such as better soil and water quality would absolutely outweigh the initial economic losses.

According to Statista, unsustainable food production represents one of the main drivers of global biodiversity decline, responsible for around 70% of terrestrial biodiversity loss through agricultural habitat conversion, farmland-driven deforestation, and irrigation-related water use. Although the full details of Statista's paid reports are not publicly accessible, their open resources emphasize the critical interconnection between food systems and biodiversity loss, highlighting issues such as the economic risks associated with biodiversity decline and consumer attitudes toward sustainable food choices (Statista, 2025).

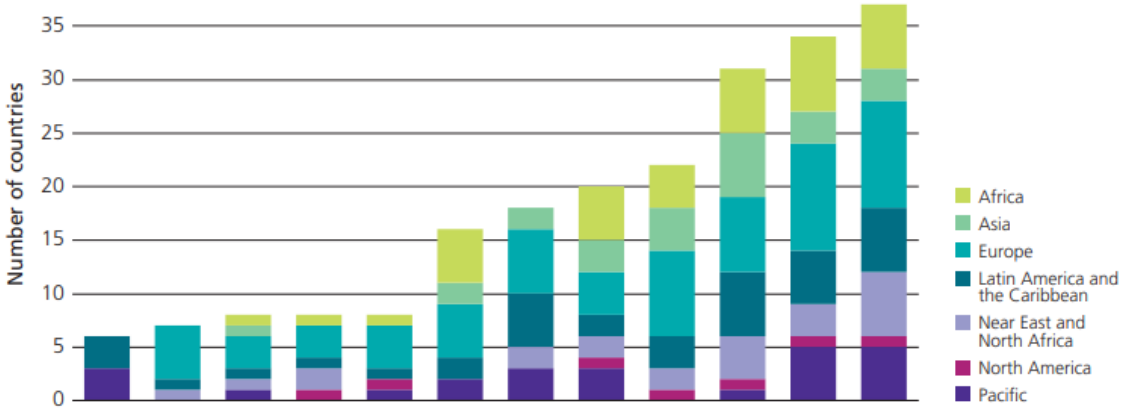

Figure 3. Reported threats of climate change to associated biodiversity.

Source: FAO, 2019, 29.08.2025.

The results of this study reinforce the central thesis that nature conservation is intrinsically linked to the economic sustainability and food security of territorial communities. Conservation-oriented policies and practices not only safeguard ecological integrity but also act as catalysts for diversifying rural economies, improving agricultural productivity, and fostering resilience to environmental and geopolitical shocks.According to Statista, Ukraine's gross agricultural output is valued at USD 40.64 billion with a projected 2.07% annual growth rate (CAGR 2025-2029). Agricultural exports are expected to reach USD 17.6 billion by 2029, growing at approximately 3.02% annually. This underscores the sector's pivotal role, contributing 7.41% of national GDP and occupying 41.5 million hectares of land (Statista, 2025).

Nature conservation measures – such as crop rotation, agroforestry, and organic farming – can directly enhance this productivity while mitigating soil degradation and water scarcity risks. FAO (2023) reports that communities adopting ecosystem-based agriculture experience a 30% increase in soil productivity and 25% lower irrigation costs within five years.

Ukraine is the world's largest producer of sunflower seeds (24.7% of global output) and the leading exporter of sunflower meal (39.8% of global trade). These commodities are highly dependent on healthy soils, pollinator populations, and water resources – all of which are supported by conservation measures. Without adequate biodiversity protection, these export advantages could be undermined by declining yields and quality. Moreover, as the European Commission notes, EU Green Deal directives and Farm to Fork Strategy increasingly demand traceable, low-carbon, and eco-certified agricultural products. This shift in consumer preference opens premium markets for Ukrainian communities that integrate biodiversity protection with sustainable production methods (European Commission, 2021).

The global food packaging market is projected to grow by ~25% between 2022 and 2028, reaching USD 512 billion (Statista, 2025). This expansion is driven in part by the transition toward biodegradable and compostable materials. Integrating local agricultural production with packaging material supply chains – e.g., producing bioplastics from maize or sugarcane – could

provide dual benefits: new income streams for farmers and reduced environmental impact. For example, European bioplastic production capacity reached 2.42 million tonnes in 2023, with forecasts of >3 million tonnes by 2027 (European Bioplastics, 2024). Ukrainian territorial communities could position themselves as suppliers of feedstock for this sector, aligning with conservation principles while expanding economic opportunities.

Ecotourism represents another synergistic avenue for linking conservation with economic growth. The Ukrainian travel and tourism market is forecast to grow from €640.1 million in 2024 to €930.7 million by 2029, at a 7.77% CAGR (Statista, 2025). Nature reserves, protected landscapes, and agritourism initiatives – when effectively managed – can draw domestic and international visitors, creating employment opportunities while incentivizing habitat preservation. Examples from Poland's Białowieża Forest and Romania's Danube Delta illustrate how well-designed conservation areas can generate significant tourism revenue while safeguarding biodiversity. Ukrainian communities situated near national parks or Ramsar wetlands could replicate such models, especially when supported by local governance and infrastructure investment.

The comparative analysis of EU and Ukrainian frameworks indicates that decentralized governance and community-led initiatives tend to yield more sustainable outcomes than centralized, one-size-fits-all approaches. Municipalities that integrate biodiversity valuation into budget planning and direct a portion of eco-tourism or green business revenues into conservation funds can achieve long-term stability.

5. Conclusions

This study demonstrates that nature conservation is not a simple ecological objective but a multifaceted socio-economic transformation influenced by environmental policies, sustainable agricultural practices, market dynamics, and community engagement. The systematic review and comparative analysis of literature and case studies allow drawing several overarching conclusions:

1. To fully benefit from conservation, both community engagement and legislative action are necessary. Activating economic interests through the modification of local governance as well as strengthening the regulations employing the use of sustainable land use practices have positive environmental consequences. Policies implemented in agriculture that aid in modification of the conservation practices cherish healthy food environments with reasonable access to quality food. Such governance structures are important for enabling shifts towards sustainable agriculture and for ensuring that conservation policies do not inadvertently result in negative socio-economic impacts.

2. The analysis indicates that meeting the requirements of nature conservation in the socio-economic development strategies of the territorial communities is not only an obligatory condition for the ecological balance of nature, but it is also a stimulant for smooth economic adjustment and maintenance of level of food security. If local communities wish to survive in the future and protect the environment, long-term planning and short-term investments should be balanced. With an economic policy integrated with conservation, these communities can prosper without disturbing their natural ecosystem. This study demonstrates that nature conservation is not an isolated environmental agenda but a strategic driver of economic growth, food security, and public health in territorial communities.

Based on the systematic review, comparative analysis, and integration of quantitative data, the following conclusions can be drawn:

1. Conservation enhances agricultural productivity and economic resilience. Implementation of ecosystem-based agricultural practices (e.g., crop diversification, agroforestry, organic farming) improves soil health, optimizes water use, and maintains biodiversity, resulting in higher yields and reduced production costs.
2. Biodiversity protection strengthens market competitiveness. Ukraine's dominant position in global sunflower production and export is highly dependent on healthy ecosystems. Conservation safeguards these advantages while opening access to premium eco-certified markets, especially within the EU's Green Deal framework.
3. Integration with circular economy models creates new income streams. Aligning agricultural production with sustainable packaging supply chains (e.g., bioplastics feedstock) can generate additional revenue while reducing environmental impact and promoting low-carbon trade. Ecotourism provides a complementary economic pathway. Properly managed protected areas and rural landscapes can attract tourism investment, diversify local economies, and create jobs without depleting natural resources.
4. Local governance is pivotal for success. Decentralized decision-making and community-led conservation funds improve accountability and tailor strategies to local ecological and socio-economic contexts. Conservation policies require social balancing mechanisms. Short-term restrictions on resource use must be offset by targeted subsidies, skill development programs, and market integration to ensure community buy-in and equitable benefits.
5. Future Research Directions. To build upon the findings of this study, future research should: conduct longitudinal field studies. Track the economic and ecological impacts of conservation measures in specific Ukrainian communities over a 5-10 year horizon; integrate natural capital accounting into local governance analysis. Quantify how biodiversity valuation in municipal budgets affects decision-making, investment allocation, and resilience planning; examine socio-cultural dimensions of conservation adoption. Use participatory rural appraisal methods to understand community

perceptions, traditional knowledge integration, and barriers to behavioural change; assess post-war reconstruction scenarios. Evaluate how nature-based solutions can be embedded into agricultural and infrastructure restoration plans in conflict-affected regions of Ukraine; link conservation to food system innovation. Explore synergies between biodiversity protection, climate-smart agriculture, and advanced technologies (e.g., precision irrigation, AI-driven soil monitoring); analyse cross-border cooperation models. Study EU–Ukraine joint initiatives to identify effective mechanisms for knowledge transfer, funding, and scaling up conservation-led rural development.

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