

Exploring the Legal Dimensions of Environmental Policy within the Framework of Ukraine's Sustainable Development Strategy

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Abstract

This article is devoted to the theoretical and practical analysis of the organizational and legal problems involved in the evolution and implementation of the environmental policy as integral part of the sustainable development strategy of Ukraine. This research is based on the international documents defining the goals of sustainable development and that are guidelines for harmonizing legal instruments in rationalizing natural resource use conforming the European Green laws. Based on the analysis of the current environmental legislation of Ukraine and its application, as well as inculcating the views of scientists, a conclusion is drawn about the need for prioritizing sectoral environmental reforms in the fields of biodiversity protection, curbing industrial pollution, waste management, emission monitoring and reporting, environmental control, and statutory responsibility. The grey areas of improving Ukraine's environmental policy ensuring effective, transparent and modern post-war reconstruction are identified as: strengthening control over compliance with standards and environmental regulations concerning natural resource management; improving the mechanism of payments for harming the environment; giving tax benefits and other financial incentives to environmentally innovative practices; encouraging the environmental audit and certification; pricing flexibly the ecological products; stimulating scientific temperament in solving environmental problems; and so on.

Keywords

Environmental policy; Sustainability; Management of natural resources; Environmental legislation

Introduction

The crux of the sustainable development lies in effectively addressing the intricate relationship between economic growth and environmental protection. In this context, the existence of human

existence transcends mere economic development; but also by maintaining the ability to control and protect the ecological environment. The contemporary phase of human progress is marked by rapid transformations across all facets of life, where interconnected changes dynamically evolve, mutually reinforcing one another, often with unpredictable consequences. Many of them are real threats to the further development of society. The rapid pace of world's economic growth and multiplication of production and consumption hinder the restoration of the natural environment; Consequently, visible indicators of an ecological crisis have emerged, encompassing issues such as climate change, the depletion of essential non-renewable resources, neglect of environmental safety protocols in economic endeavors, and transgressions of legal norms governing waste management, contributing to widespread environmental pollution. In turn, environmental challenges hinder global economic development and the normal life of society, leading to adverse effects on public health, increased expenditures on environmental protection, the exacerbation of the struggle for natural resources (in particular, in the form of armed conflicts and wars).

Sustainable development stands out a paramount focus in the contemporary world. The concept of sustainable development is now recognized by all countries of the United Nations as one of the priorities of humanity, the transition to which should take place at the national and global levels. The term "sustainable development" is increasingly used not only by the business community but also in official political and economic documents across various echelons. In recent decades, the international organizations have underscored the importance of achieving sustainable development. Achieving sustainable development is impossible without creating an effective decision-making system that incorporates the collective experience of social development rooted in pluralism and universal values. In line with the tenets of sustainable development, individuals emerge as active agents and prime drivers of progress. They play a direct role in shaping the contours of their lives, actively participating in decision-making processes, and overseeing the execution of those decisions.

The leading democracies of the world have chosen the path of sustainable development and successfully combined the pace of economic growth and a high standard of living with minimal environmental burden. This success is attributed primarily to a well-crafted environmental policy and proactive integration of ecological innovations into both production processes and social life. Ukraine, aligning its domestic and foreign policy, has committed to the principles of sustainable development. Within Ukraine, sustainable development holds a pivotal role in environmental policy, fostering the judicious use of natural resources, environmental protection, and the fulfillment of human needs. However, current challenges require constant attention to the interlinked issues of the economic, social and environmental development, necessitating their regulation through the lens of the concept of sustainable development (Chernik, 2019).

The primary goal of Ukraine's sustainable development is to ensure dynamic socio-economic growth while concurrently preserving the environment quality and prudently utilizing natural resources. This goal aims to meet the needs of both present and future generations through the establishing highly efficient economic system. Such a system would not only incentivize environmental sustainability, productive work, and scientific and technical progress but also exhibit a strong social orientation.

The foundational conditions of sustainable development include an economic framework rooted in a substantially modified market system, ecological sustainability based on the theory of biotic regulation of the environment, extensive international cooperation to realize sustainable development goals, and sustainable social development founded on the principle of justice. Additionally, fostering an environmentally consciousness public mindset is deemed crucial, achieved through the integration of environmental education within the education system and mass media platforms (Paton, 2016).

The recent alignment of Ukraine's environmental legislation with the regulatory framework of the European Union, prompted by the implementation of the Association Agreement, underscores the imperative for domestic laws to primarily address objective and priority requirements. This entails a comprehensive legal framework governing environmental relations, incorporating both public and private interests, and integrating the necessity for regulatory oversight in key industries. Such an approach aims to ensure the stability of societal functions and promote the sustainable development of Ukraine (Hetman and Anisimova, 2017).

In above contexts, purpose of this article aims to analyze the organizational and legal aspects of environmental policy within the framework of Ukraine's strategy for sustainable development. To fulfill this objective, the following key tasks are addressed:

- Characterizing contemporary scientific perspectives on the development and execution of environmental policy;
- Exploring the international legal facets of environmental protection in the countries of the European Union; outlining special foreign approaches to implementing environmental policies;
- Carrying out an analysis of the legal foundation of environmental policy as an integral part of Ukraine's sustainable development strategy; and
- Gauging the prospects for the implementing Ukraine's environmental policy amidst European integration processes.

These identified issues on a conceptual level deem to be pertinent, given the significance of harmonizing the interests of contemporary society with the imperative of maintaining a sound environmental state.

Evolution of Modern Scientific Thought on Environmental Policy Development

It is noteworthy to highlight the significant interest of scientists in the environmental policy issues. Over the past decade, global ecological and economic sciences have developed approaches involving information-ideological, administrative, and economic tools within environmental policy. Roberts (2010) in his study, "Environmental Policy", examines the opportunities and limitations of ecological systems and economic development. The study suggests that environmental policy serves as a potential avenue to modify the human systems to operate within environmental constraints. using essential socio-scientific concepts (political, social and economic), the work elucidates the prerequisites for the formation and implementation of environmental policy. The author further examines the development, implementation, and evaluation of environmental policy within three specific contexts: the corporation, the State, and the international level (Roberts, 2010).

Renowned British researchers E. Jordan and D. Liefferink in their publication "Environmental Policy in Europe" analyzed the evolving impact of the European Union development on politics and environmental policy within member countries, and potentially, a broader array of prospective members. This work also presents an original assessment of the extent to which Europeanization has given rise to greater convergence of environmental policy in Western Europe (Jordan and Liefferink, 2004). The study's proposal of the actual implementation mechanism of European integration, especially in the realm of environmental protection, holds particular relevance for this research. In another thorough study, "British Environmental Policy and Europe: Politics and Policy in Transition", F. Lowe and S. Ward analyzed the effectiveness of the response of environmental groups and organizations in Great Britain referring the challenges of European integration. This study explores the European orientation of British environmental policy and delves into the repercussions of "Brexit" on European environmental policy. It investigates environmental diplomacy, institutional dynamics, and policy debates concerning issues like pollution, land use, and transport (Lowe and Ward, 2005). This work contributes to the development of a more integrated European-oriented environmental policy in Ukraine, drawing insights from the experience of environmental policies in Great Britain and other European countries.

In "The Origins of Energy and Environmental Policy in Europe", Thomas Herber examines the evolution of European environmental consciousness in tandem with the successive steps of European integration in modern energy policy. The author highlights the pivotal role of the 1973 oil crisis in reshaping the integration trajectory of energy and environmental policies. Instead, environmental policy took shape through overarching measures such as energy conservation. The European Commission incorporated both energy and environmental policies into the EU political agenda, establishing an institutional framework for their development (Hoerber, 2012). In the comprehensive scientific work, "Theoretical and Empirical Analysis in Environmental Economics", diverse perspectives are explored to address current environmental challenges in developed countries, both theoretically and empirically. The book proposes effective new economic and environmental policies to tackle environmental issues, highlighting areas where traditional policies may fall short. The importance of this work lies in its in-depth analysis of key challenges faced by individuals and governments in developed countries during the transition from economic growth to the pursuit of life stability and environmental preservation amid societal development. Environmental issues addressed in this paper encompass the forest environment, air pollution reduction, adoption of renewable energy sources and fuel cell technology, agglomeration growth and urbanization, and the measurement of environmental sustainability (Nakayama and Miyata, 2019).

The 'Environmental Policy Paradox' offers an introduction to the process of environmental policymaking in the United States for air, water, land use, agriculture, energy, and waste disposal, introducing readers to global and international environmental issues. This article analyzes why some environmental ideas shape policy and others do not, explaining that even when the best short- and long-term solutions to environmental problems are identified, the task of executing these solutions often remains undone or is completed too late. Readers are offered a

comprehensive history of the environmental movement combined with a state-of-the-art account of current environmental policy (Smith, 2017).

In the work "Environmental Policy: Implementation and Enforcement", Hawke (2018) analyzes the intersection between the formation of environmental policy and its eventual implementation and enforcement through legal frameworks. Hawke (2018) further explores this subject with a focus on variables shaping the natural resource base and significance of law as a mechanism for executing environmental policy. Factors explored include changes in the form and natural resource base of EU and individual country laws, as well as a legal culture fostering a clear pattern of response to directives. It provides a nuanced exploration of the realities surrounding the implementation and enforcement of environmental principles, considering policy objectives and the constraints and expediency of law (Hawke, 2018). This research proves valuable for understanding the political challenges confronted by environmental protection specialists, aiding in the delineation of policy options for addressing contemporary Ukrainian environmental problems.

In the exploration of organizational and legal aspects of environmental policy within the context of the strategy of sustainable development of Ukraine, Feloniuk's monograph, "Modern Environmental Policy of Ukraine: Legal Principles of Institutional and Functional Support for the Formation and Implementation", holds relevance (Felonyuk, 2023). This scholarly work conducts a comprehensive comparative analysis of environmental programs across leading countries worldwide. It suggests considering the legal concept of "institutional and functional provision for the formation and implementation of environmental policy" broadly, encompassing a system of State, non-State and supranational institutions that directly and indirectly influence State's environmental policy. The monograph underscores the pressing need for Ukraine to engage diverse social, political, public, economic and educational entities in active ecopolitical endeavours. It advocates for the subsequent active involvement of these entities in direct activities related to environmental protection, monitoring expertise, and control over quantitative indicators of natural resources use, among other aspects (Felonyuk, 2023).

The legal aspect of this issue is crucial, as highlighted by Kantsurak (2020). Throughout the years of independence, Ukraine has witnessed the active creation of various concepts, laws, recommendations and proposals by public organizations. However, at the same time, despite the vigorous declarative and recommendatory activities, a coherent and systemic environmental policy has yet to materialize (Kantsurak, 2020). Such a situation underscores the imperative to formulate a comprehensive and purposeful national environmental policy. This policy should effectively balance the efforts of all stakeholders, including the State, citizens, public organizations, producers and consumers.

In modern times, it is axiomatic to assert that the socio-economic development of a region, individual country, and the world at large is directly dependent on the effectiveness of environmental policy, the rationality of its formation, as well as the extent to which measures for environmental conservation and protection are implemented (Felonyuk, 2021). At the same time, achieving a balanced use of natural resources, and, consequently ensuring ecological safety, an environment conducive to

human life and health, and the preservation of ecological equilibrium, requires coordinated from all stakeholders without exception – including State and supranational entities, public representatives, and individuals.

The theoretical and methodological challenges that are often overlooked or underestimated, yet crucial for integration into the "practical component" of environmental policy implementation, encompass the following: studying the features of the environmental policy implementation at both macro and micro levels; identifying the optimal tools for conducting environmental policy taking into account economic interests and associated risks; crafting tools for educational initiatives and enhancing public awareness, including avenues for public participation in environmental decision-making processes. Modern legal studies addressing the challenge of upholding the environmental principles within sustainable development should incorporate the latest trends in social, humanitarian, and natural sciences.

International Legal Dimensions of Environmental Protection in European Union Countries

The detrimental impact of anthropogenic influence on the quality of life and substantial economic losses has underscored the imperative for the development of effective environmental policies. European countries emerged as pioneers in recognizing the direct correlation between quality of life, and a conducive environment for humanity. In the 1960s, some countries began to adopt appropriate legislation to establish environmental standards and forming governmental bodies that deal with environmental issues (Kremer and Winter, 2007).

However, it has become evident that addressing many environmental problems is attainable within the framework of individual States, because issues such as climate change, ozone layer depletion, and marine pollution transcend national borders. The realization drawn that environmental protection requires consideration of both national and supranational dimensions. In Europe, where small States and an intricate river network prevail, the transboundary transport of pollutants significantly affects the environment. Until the late 1980s, in many countries, the primary contributor to air pollution was emissions into the atmosphere, often attributed to neighboring States.

In Europe, an active supranational environmental policy was initiated in 1973 with the adoption of the First Environmental Action Program, coinciding with the first wave of EU expansion. To implement this program, in 1972, the Council of Heads of Government of the EEC member states adopted a decision to broaden the Community's competence, extending it to the environment realm. The program, developed at that time, foreshadowed aspects of the modern concept of sustainable development. In particular, it included the provision that economic development, prosperity and environmental protection are interdependent processes. The document underscored that "environmental protection is one of the main tasks of the Community"¹. Key objectives within the program encompassed the prevention,

¹ Council Decision of 14 May 1973 adopting a research program for the European Economic Community on the protection of the environment Council Decision of 14 May 1973 adopting a research program for the European Economic Community on the protection of the environment. Available online at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31973D0126&qid=1510074506525>

reduction and limitation of environmental damage, the preservation of ecological balance, and rational use of natural resources.

In 1992, during the UN Conference on Environment and Development in Rio de Janeiro, several documents were adopted, outlining key provisions for a new paradigm of human development. Central to this concept was the recognition of the close interrelationship among ecological, economic and social aspects of human development. The resolution emphasized that comprehensive solutions, taking into account the balance of the interests in the development of natural resources and society, were essential to address these challenges collectively forming the bedrock of world civilization. The transition to sustainable development was identified as a universal task for humanity in the 21st century (UN, 1992). The concluding document recommended that each country formulate a national strategy for sustainable development grounded in mutually agreed economic, social and environmental plans. One of the goals was to ensure socially responsible economic development, incorporating measures to safeguard the natural environment for the benefit of future generations.

In 2015, the UN General Assembly adopted a pivotal document titled "Transforming Our World: Agenda for Sustainable Development for the period up to 2030"², encompassing 17 goals and 169 targets aimed at eradicating poverty, conserving the planet's resources and ensuring well-being for all. Additionally, the agenda outlined 232 indicators to measure progress towards these objectives (Moyer Jonathan and Hedden, 2020). The document draws special attention to the fact that achieving goals in the field of sustainable development is possible only through joint work of administrative bodies, institutions of civil society, and citizens. Referred to as the goals of sustainable development (GSD), they represent a harmonious fusion of economic, social and environmental development priorities, as along with the tools necessary for their achievement. The attainment of ecological balance and the promotion of sustainability are integral components of this overarching framework of sustainable development.

The implementation of the GSD assumes special importance in light of the signing of the Association Agreement between Ukraine and, on one hand, the European Union, the European Atomic Energy Community, and their member states, on the other hand. This agreement outlines a commitment to advancing the long-term goals of sustainable development and a green economy. The key principles governing cooperation in the environmental sphere are enshrined in the provisions of Article 363 of Chapter 6 titled "Environment" and Annex XXX to the Association Agreement.

State Environmental Policies in Pursuit of Sustainable Development

Nowadays, it is expedient to look at all spheres of life through an ecological prism, making environmental policy an integral part of the national agenda of countries. Environmental policy encompasses the collective efforts of society and the government with the objectives of protecting and enhancing the natural environment,

(assessed on 17 December 2023).

² Transforming our world: Agenda for sustainable development for the period up to 2030. Available online at: <https://www.un.org/sustainabledevelopment/ru/about/development-agenda/> (assessed on 17 December 2023).

effectively harmonizing natural resource management and environmental protection functions, ensuring environmental safety of citizens, promoting the adoption of waste-free and low-waste environmentally friendly technologies, fostering the development of environmental education (Yatsenyo, 2021).

The UN Sustainable Development Agenda (Agenda 2030) stands as a "comprehensive program for achieving peace and prosperity for all people and the planet" (Koff, 2021). As the program emphasizes, the fight against poverty depends on reducing global inequality, mitigating climate change and conserving natural resources. The resulting GSDs signify a shift in international cooperation towards a globally transformative development approach, aiming to meet the social and environmental needs of local communities while simultaneously eliminating power imbalances at the global scale. The 2030 Agenda promotes interconnectedness and complex interactions within and between individual development goals. The UN, along with its member countries, has set an ambitious task, acknowledging that accomplishment of these goals significantly relies on the actions of individual nation-states. Consequently, a question arises: what methods are countries employing to achieve the Goals of Sustainable Development, and how suitable are these approaches for the monumental task at hand?

One of the traditional political tools used by the countries of the world is environmental impact assessment (hereinafter - EIA). Originating in the USA in 1969, EIA has evolved into a crucial component of numerous international documents, including the UN Framework Convention on Climate Change and the UN Convention on the Law of the Sea. EIA requires that those who make decisions about the implementation of projects and strategies consider their environment impact and explore feasible alternatives. The assessment highlights on two principles: ensuring decision-makers are well-informed and providing accessible information to the general population (He, 2020).

In the People's Republic of China, EIA is recognized as the cornerstone of environmental reform. While EIA was initially incorporated into legislation in the 1970s, it was often perceived as a mere formality rather than a practical decision-making tool, limiting its preventive efficacy (He, 2020). To address this, subsequent legislative amendments have been introduced aiming to streamline procedures, elevate fines, and promote public participation, thereby enhancing the substantive role of EIA in environmental decision-making. He (2020) singles out three aspects of the Chinese reality that reduce the legitimacy and quality of EIA decisions. First, the EIA reform diverges from the broader environmental reform characterized by centralization. Secondly, the judicial system's lack of independence hinders the accountability of officials. Thirdly, concept of "public participation" in decision-making and oversight is narrowly construed, involving only groups directly affected by the project. The determination of public interest in such cases is ambiguous, and mechanisms for involving wider range of persons, including non-governmental organizations, are lacking. Although the State offers procedural opportunities for non-governmental organizations to protect public interests against polluters, the overall framework for their participation remains limited.

Undeniably, EIA plays an invaluable role in the management of sustainable development. Its significance lies in providing criteria to assess the socio-economic impact of projects, programs and strategies. In addition, EIA has opened up opportunities for public participation in development planning, fostering industry transparency. Global recognition of this tool further underscores its importance. However, its effectiveness in achieving GSD is compromised by "defensive" positioning.

Wales, for example, encountered difficulties in implementing the principles of sustainable development. Jenkins (2018) examines the context of natural resource management and the recently enacted Environment Wales Act 2016. She observes that applying principles of sustainable development in this field is complicated due to the dependence of ecosystems well-being on external factors - both natural and human. This means that regulating them requires consideration of the complex nature of socio-ecological relations rather than a purely technical approach (Jenkins, 2018). Modern scientific literature highlights several key ideas in the field of sustainable development, with representative management standing out prominently. Representative management is considered as a basic principle in environmental decision-making, ensuring the incorporation of local and traditional environmental knowledge, as well as active participation from local communities in solving problems. Equally important is the adaptive management. While legal and political systems often emphasize long-term predictability, adaptive management requires increased flexibility in decision-making to effectively respond to new information. This requires the flexibility of decision makers (Jenkins, 2018). Given these ideas and the foundational principles of sustainable development, such as principles of prevention, precaution and participation, which underpin natural resource management in Wales, the Welsh Environment Act should be recognized as an important step forward in achieving GSD. Primarily, it creates a "space" for institutional self-reflection. However, in pursuit of creating flexible procedures, legislators missed the crucial aspects of monitoring and reporting on the program implementation process. While the law enshrines the principles of participation and interaction, it falls short in providing procedural rights to ensure them. The absence of mechanisms for transferring information from the grassroots level to the national policy-making level in resource management poses a risk. This deficiency undermines all efforts and compromises the development of a robust legal framework for adaptive management in this field.

Likewise, Chile stands out as a notable success story in reforming State policy of sustainable development, transforming from a "green laggard" to a regional leader in just a few years. Since 2017, the country shifted its focus, prioritizing environmental protection over economic and investments. This shift in priorities enabled Chile to rapidly overhaul its policy sustainable development in a remarkably short timeframe. Acknowledging the international significance of Chile's sustainable development policy formation, it's crucial to recognize the impact of several internal factors. Firstly, the institutional and political legacy played a pivotal role in determining how international norms were implemented at the national level, influencing the timing and the content of the reform. Secondly, environmental protests created a window of opportunity for reform and increased the influence of civil society organizations (Madariaga, 2019). Thirdly, the government strategically used the window of

opportunity created by civil society, fostering a favorable political environment for reform. The primary antagonist to those reforms was the business sector, consistently prioritizing its narrow interests. This suggests that the further success of reforms in Chile and the broader region hinges on the ability of society, the state and the international community to persuade businesses of the need to contribute to the implementation of the sustainable development agenda (Madariaga, 2019).

Legal Foundations of Environmental Policy: A Key Component of Ukraine's Sustainable Development Strategy

Ensuring ecological safety and maintaining ecological balance on the territory of Ukraine, as stated in Art. 16 of the Constitution, is a fundamental duty of the State. Everyone has the right to an environment safe for life and health and is entitled to compensation for damages resulting from the violation of this right. Constitution places upon all citizens of our country the responsibility to protect nature and its resources. Fulfilling one's constitutional duty (Article 16 of the Constitution of Ukraine)³, in 2000, the Government of Ukraine directed its efforts towards guaranteeing citizen's rights to an environment safe for life and health (Article 50 of the Constitution of Ukraine). To achieve this goal, the following main priorities were identified:

- 1) Development and improvement of environmental legislation;
- 2) Institutional improvement of the system of public administration in the field of environmental protection and resource management;
- 3) Increased public participation in the development and decision-making processes in this domain;
- 4) Establishment of an extensive system of institutions of environmental education and upbringing;
- 5) Development and improvement of the economic mechanism of natural resource management;
- 6) Deepening international cooperation in environmental protection, along with the harmonization of national environmental legislation with European standards;
- 7) Creation of an effective state system for monitoring the environment and the use of natural resources⁴.

The implementation of these specified priorities required the execution of a comprehensive set of legal measures aimed at creating a safe environment for human activity. In the modern development of Ukrainian environmental legislation, a noticeable trend is evident towards its detailed specification and the continual improvement of its individual parts. A number of basic legal acts have been put in place to regulate almost all facets of environmental protection and the use of natural resources. The groundwork for legislation in the realms of environmental protection, the use of natural resources, and environmental safety have been established (Galushkina, Musina and Potapenko, 2017). Thus, in particular, the Parliament of

³ Constitution of Ukraine: official text. Kyiv, 2020. 141 p. <https://rm.coe.int/constitution-of-ukraine/168071f58b>

⁴ On the Basic principles (strategy) of the state environmental policy of Ukraine for the period until 2020: Law of Ukraine dated 12.21.2010 № 2818-VI (expired). Available online at: <https://zakon.rada.gov.ua/laws/show/2818-17#Text>

Ukraine has passed the key laws, including but not limited to, "On Environmental Protection", "On Nature Reserve Fund", "On Atmospheric Air Protection", "On Animal Life", "On the Use of Nuclear Energy and Radiation Safety", "On Handling of Radioactive Waste", "On Waste", "On Plant Life", "On Energy Saving", "On Alternative Sources of Energy", "On Alternative Types of Fuel", "On Energy Lands and the Legal Regime of Special Zones of Energy Objects", "On the Electric Energy Market", "On Heat Supply", and others.

Throughout Ukraine's years of independence, additional environmental protection legislation has been established, complementing existing laws, including the Law of Ukraine "On Environmental Protection". This legislation regulates legal relations in areas where humans and nature interact⁵. Key components of this legal framework include:

- *Constitution of Ukraine*: Fundamental legal norms ensuring the effective use and protection of lands, subsoil, waters, forests, and the overall environment are concentrated in Articles 13, 16, 50, 92)⁶
- *The Forest Code of Ukraine*: Addresses issues related to the conservation, restoration, and rational use of forests.
- *The Water Code of Ukraine*: Provides legal protection for waters against clogging, pollution, depletion and regulates the procedure for their use.
- *The Code on Subsoils of Ukraine*: Ensures the rational, comprehensive use of subsoils to meet the needs of society while protecting and guaranteeing the safety of people and the environment during the use of subsoils.
- *The Code of Civil Protection of Ukraine*: Ensures the protection of the population, territories, natural environment and property, as along with environmental safety.

The specified normative legal acts determine the principles and limits of activities related to environmental protection, the utilization of various natural resources, the maintenance of environmental safety, and the preservation of unique territories and natural objects integral to the the historical and cultural heritage of Ukraine. Aligned with the global goals of sustainable development until 2030 outlines in the UN General Assembly Resolution No. 70/1 dated September 25, 2015, and considering the adaptations tailored to Ukraine's specific development context as detailed in the National Report, at the aims include:

1. *Urgent Climate Action*: Implementing immediate measures to combat climate change and address its consequences.
2. *Water Resource Preservation*: Preserving and utilizing water resources in a manner that supports sustainable development.
3. *Terrestrial Ecosystem Protection and Restoration*: Focusing on the protection and restoration of terrestrial ecosystems, promoting their rational use, and ensuring sustainable forest practices.
4. *Land and Biodiversity Conservation*: Halting the processes of land degradation and biodiversity loss⁷.

⁵ On environmental protection: Law of Ukraine dated 06.25.1991 № 1264-XII. Available online at: <https://zakon.rada.gov.ua/laws/show/1264-12#Text>

⁶ Constitution of Ukraine: official text. Kyiv, 2020. 141 p. <https://rm.coe.int/constitution-of-ukraine/168071f58b>

⁷ On the Sustainable Development Goals of Ukraine for the period until 2030. Decree of the President of

The goals of the sustainable development of Ukraine for the period until 2030 serve as guidelines for formulating forecasting and program documents, as well as normative and legal acts. These efforts aim to ensure a harmonious balance among the economic, social and environmental dimensions of the sustainable development of Ukraine⁸. According to the Association Agreement, the purpose of cooperation between Ukraine and the EU is designed to achieve environmental objectives. These include the preservation, protection, improvement and sustainable reproduction of environmental quality, as well as the protection of public health. The Agreement emphasizes the prudent and rational use of natural resources, and encourages measures at the international level to address regional and global environmental problems. To realize these objectives, the parties commit to a range of collaborative actions:

1. *Information and Experience Exchange*: Both parties commit to sharing information and experiences related to environmental issues.
2. *Joint Research Activities*: Collaboration on joint research endeavors to deepen understanding and address environmental challenges.
3. *Exchange of Environmentally Friendly Technologies*: The agreement encourages the exchange of information about environmentally friendly technologies to promote sustainability.
4. *Disaster and Emergency Response Planning*: Both parties agree to plan and coordinate responses to natural disasters and other emergency situations.
5. *Regional and International Collaboration*: The parties commit to joint activities at regional and international levels, in line with multilateral agreements on environmental protection ratified by both parties. Additionally, they may engage in collaborative efforts within relevant agencies⁹, as deemed appropriate.

These provisions highlight the shared commitment of Ukraine and the EU to collaborative efforts in the spheres of environmental protection and sustainable development.

The legislation of Ukraine is expected to align with EU legislation in various critical areas. These include climate change management, education and training, access to information regarding environmental issues and the decision-making process, air quality, water and water resources management, waste and resource management, nature conservation, ecosystem preservation and protection, industrial pollution, industrial threats, the use of chemicals, and more. The harmonization of Ukrainian laws with EU standards in these domains reflects a commitment to fostering compatibility and cooperation in environmental policies and practices. On February 28, 2019, the Law of Ukraine "On the Basic Principles (Strategy) of the State Environmental Policy for the Period Until 2030" was approved, which states: "The goal of the state environmental policy is to achieve a good state of the environment by introducing an ecosystem approach to all areas of socio-economic development of Ukraine in order to ensure the constitutional right of every citizen of Ukraine to a

Ukraine dated September 30, 2019 № 722/2019. Available online at:

<https://zakon.rada.gov.ua/laws/show/722/2019#Text>

⁸ On the Sustainable Development Goals of Ukraine for the period until 2030. Decree of the President of Ukraine dated September 30, 2019 № 722/2019. Available online at:

<https://zakon.rada.gov.ua/laws/show/722/2019#Text>

⁹ Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their member states, on the other hand, dated November 30, 2015.

Available online at: https://zakon.rada.gov.ua/laws/show/984_011 (assessed on 17 December 2023).

clean and safe environment, the introduction of balanced natural resource management and the preservation and restoration of natural ecosystems"¹⁰.

The State environmental policy aims to achieving strategic goals, including the formation of environmental values and principles of sustainable consumption and production in society. It seeks to ensure the sustainable development of Ukraine's natural resource potential, integrate environmental policy into the decision-making processes regarding the socio-economic development of Ukraine, and reduce environmental risks to minimize their impact on ecosystems, socio-economic development and public health. Additionally, the policy focuses on the improvement and development of the State environmental management system¹¹.

Simultaneously, the state determines the anticipated results of the execution of the aforementioned initiatives. By 2030, Ukraine aims to attain a level of balanced (sustainable) development wherein dependence on non-renewable natural resources and environmental pollution will be reduced to ecologically acceptable levels. Performance indicators are established to assess the implementation of the State environmental policy in the future. In pursuit of Sustainable Development Goals (SDGs), Ukraine signed the Presidential Decree "On the Goals of Sustainable Development of Ukraine for the Period Until 2030". This decree established key guidelines for the development of projects, forecasts and program documents, and regulatory and legal acts, aiming to ensure equilibrium among the economic, social and environmental dimensions of the sustainable development of Ukraine¹². Thus, the environmental policy of Ukraine is aligned with the concept of sustainable development, which is confirmed by the provisions of approved legal acts.

Charting the Course: Ukraine's Environmental Policy Prospects amidst European Integration Processes

Prior to full-scale war, experts claimed that bridging the gap between the state of the environmental protection in the EU and Ukraine in one leap was deemed impossible. They emphasized that, to successfully align with the requirements of the European Green Course, Ukraine must consistently fulfill certain prerequisites. However, the large-scale destruction caused by Russian aggression ushered new realities and conditions. Today, in the current wartime context, significant opportunities for rapid modernization and development are witnessed. With Ukraine having received the status of a candidate for joining the EU, it is imperative to transition to EU legislation, where the green economy stands as the primary development vector. Simultaneously, as rightly noted in the doctrine, the journey towards fulfilling environmental and climate obligations is neither short nor simple. This complexity arises from approximately 200 normative legal acts in the field of environment and climate within

¹⁰ On the Basic principles (strategy) of the state environmental policy of Ukraine for the period up to 2030: Law of Ukraine dated February 28, 2019. № 2697-VIII Available online at: <https://zakon.rada.gov.ua/laws/show/2697-19>

¹¹ Ibid

¹² On the Sustainable Development Goals of Ukraine for the period until 2030. Decree of the President of Ukraine dated September 30, 2019 № 722/2019. Available online at: <https://zakon.rada.gov.ua/laws/show/722/2019#Text>

the EU, according to the European Commission. Ukraine must align its legislation and policies with these acts (Golubovska-Onisimova *et al.*, 2023).

The Ukrainian environmental community staunchly advocates for the assertion that, in the long term, the post-war economic development process should be the cornerstone of the country's shift towards a green and clean economy. To facilitate green reconstruction of post-war Ukraine, improving the ecological landscape and enabling integration into European markets and political arenas, it is imperative to not only secure investments, but also establish effective public administration institutions and a well-defined legal framework. These institutions and frameworks must possess the capability to ensure a seamless transition to European standards concerning industry, utilization of natural resources, and environmental protection¹³. When considering the pivotal reforms in the realm of environment and climate change that serve as the foundation for a green recovery and simultaneously showcase Ukraine's genuine intentions to the EU, the following sectoral reforms are essential:

Protection of Biodiversity

Ensure the preservation of natural habitats for wild flora and fauna is of utmost importance, and this can be achieved through the establishment and proper management of the Emerald Network territories. Specialists have repeatedly emphasized that the preservation of biodiversity requires drastic changes in the State policy of Ukraine, particularly shifting from the notion of an agrarian country to one that prioritizes the well-being of all natural resources. This entails the establishment of a robust system for the protection, management and monitoring of natural territories, species and habitats. It also involves a transition from an exclusively consumerist model in the use of forest, water and land resources towards a more balanced approach that promotes sustainable development¹⁴. Hundreds of thousands of hectares of Ukrainian forests suffered extensive damage due to Russian aggression, coinciding with significant administrative changes in the forest management system. To prevent further degradation of forests during post-war reconstruction, it is important for forestry to evolve in alignment with the goals outlined in Ukraine's State Forest Management Strategy until 2035¹⁵. This entails switch to discontinuous logging systems, expanding the area of naturally originated forests, normalizing the wood market, and other essential measures.

Reduction of Industrial Pollution

Certain industrial processes in Ukraine, characterized by emissions of volatile organic compounds, currently lack regulation. Therefore, it is urgent to align national legislation with key EU directives aimed at improving atmospheric air quality. This

¹³ Priority environmental reforms for the green recovery of Ukraine. Available online at: <https://epl.org.ua/announces/pershochergovi-ekologichni-reformy-dlya-zelenogo-vidnovlennya-ukrayiny/> (assessed on 17 December 2023).

¹⁴ Priority environmental reforms for the green recovery of Ukraine. Available online at: <https://epl.org.ua/announces/pershochergovi-ekologichni-reformy-dlya-zelenogo-vidnovlennya-ukrayiny/> (assessed on 17 December 2023).

¹⁵ On the approval of the State Forest Management Strategy of Ukraine until 2035. from the Decree of the Cabinet of Ministers of Ukraine No. 1777 dated December 29, 2021 Available online at: <https://zakon.rada.gov.ua/laws/show/1777-2021-%D1%80#Text>

synchronization is essential for regulating emissions of pollutants that pose significant risks to health and the environment.

Waste Management

The main step towards the implementation of European standards in this realm occurred with the adoption of the Law of Ukraine "On Waste Management" in 2022. This legislation establishes the groundwork for implementing an extended producer responsibility, fostering a circular economy, and introducing a waste management hierarchy. However, to activate the mechanisms and tools outlined in the law, additional legislation, including laws and by-laws pertaining to waste electrical and electronic equipment, batteries and accumulators, waste packaging, safe disposal of waste and management of waste from the extractive industry, must be enacted. Enhancing the state management system can be achieved through the establishment of a new central body of executive power. This entity would improve the management process, oversee permitting activities, streamline accounting procedures, and provide regulatory and methodological support in the field of waste management.

Monitoring of Emissions and Reporting

To fulfill EU environmental protection standards, Ukraine took significant step on September 20, 2022, with the adoption of the Law of Ukraine "On the National Register of Emissions and Transfer of Pollutants"¹⁶, and the corresponding procedure was also approved¹⁷. According to the provisions of the law, the national open electronic register of emissions should become operational as early as 2024. Its implementation will obviously allow State bodies to better understand the quantitative and qualitative indicators of industrial emissions of the major polluters. This, in turn, will empower governmental bodies to make informed decisions aimed at reducing emissions. Simultaneously, the public will gain access to vital environmental information, allowing them to influence the authorities if necessary, based on the disclosed data.

Environmental Control and Responsibility

Ukraine should thoroughly reboot the system of State environmental control to guarantee adherence to environmental legislation and enhance the state of the environment. For this, endowing the the environmental control body with the requisite authority, eliminating existing obstacles and legal conflicts. Legislation should clearly define the forms of state environmental control measures, including scheduled and unscheduled inspections, raids, patrols, and swift response to calls, along with the corresponding grounds for their implementation.

It should be noted that, in line with the implementation of the European Green Deal, environmental and climate considerations must be integrated into various sectors such

¹⁶ On the National Register of Emissions and Transfer of Pollutants. Law of Ukraine № 2614-IX dated September 20, 2022. Available online at: <https://zakon.rada.gov.ua/laws/show/2614-20#Text>

¹⁷ On the approval of the Procedure for maintaining the National Register of Emissions and Transfer of Pollutants. Resolution of the Cabinet of Ministers of Ukraine № 560 of June 2, 2023. Available online at: <https://ips.ligazakon.net/document/KP230560?an=1>

as energy, agriculture, industrial policy, the single market, and transport. In addition, in Ukraine, majority of environmental protection reforms endow local authorities with new responsibilities and create new opportunities for regional advancements. The effectiveness of the implementing the Association Agreement is intricately linked to the successful establishment of novel mechanisms, standards, and practices on the grassroots level. This correlated is particularly significant within the framework of State regional policy, in particular, in the environmental domain (European Green Deal, 2021).

It is crucial to highlight that major reforms in areas such as environmental impact assessment, strategic environmental assessment, water resources management, pollution monitoring, and access to environmental information were initiated either before or during the full-scale invasion of Ukraine. In the aftermath of the conflict, any programs and projects for post-war reconstruction must be meticulously developed and approved, accounting for environmental considerations through the procedures like strategic environmental assessment and environmental impact assessment, and with mandatory incorporation of public opinion. Aligning with practices in the EU, an effective dialogue between central and regional authorities, local self-government, civil society and expert circles should be established in Ukraine. This collaborative approach aims to jointly formulate develop approaches and solutions for carrying out the necessary transformations and achieving ambitious environmental goals that will positively affect the lives of citizens.

Conclusion

The concept of sustainable development delineates the overall trajectory of societal progress, with a focus on the environmental sphere. Sustainable development entails harmonious interaction between humanity and natural resources, emphasizing balance and interdependence. This involves rational and efficient consumption of natural resources while minimizing negative impacts during the satisfaction of individual needs. Humanity's understanding of the need to take into account the possible risks associated with harmful effects on the environment contributes to constant cooperation at the international and regional levels. Global environmental problems require joint efforts and the execution of appropriate policies. International agreements articulate the primary goals of sustainable development, serving as guiding principles for the pursuit of nations. At the national level, various normative legal acts have been approved to consolidate and actualize the concept of sustainable development. These legislative measures establish the foundation of environmental policy, outlining tasks, goals, and principles that guide national-level environmental initiatives.

The Association Agreement with the EU and the European Green Deal has set the course for a substantial transformation of Ukraine's environmental policy. However, due to the military invasion of its territory, not all planned measures have been implemented. The war has unsurprisingly catalyzed State measures focused on economic and infrastructure development, aligning with the principles of the European Green Deal. To achieve this, prioritized horizontal and sectoral environmental reforms are imperative. These reforms aim to align the field of environmental management with European standards, ensuring a swift, high-quality, transparent, open, and modern restoration process from an ecological perspective. First of all, among these

reforms are biodiversity protection, reduction of industrial pollution; waste management; emissions monitoring and reporting, as well as environmental control and responsibility.

The key areas for enhancing Ukraine's environmental policy encompass several aspects. These include:

- *Strengthening Regulatory Oversight*: Enhancing control over adherence to norms, standards, and environmental regulations in natural resource management.
- *Organizational Improvement*: Reforming the structure of environmental management bodies for increased efficiency.
- *Technical Enhancement*: Bolstering the technical capabilities of environmental control mechanisms.
- *Impact Payments Mechanism*: Improving the mechanism for assessing and compensating negative environmental impacts.
- *Financial Incentives*: Utilizing tax benefits and other financial incentives to promote eco-innovation processes.
- *Environmental Management Tools*: Actively applying environmental audit, environmental certification, and flexible pricing for ecological products.
- *Emission Quota Trading*: Introducing a system for trading emission quotas.
- *Ecological Development System*: Establishing an effective system for ecological development and incentivizing scientific activities to address environmental challenges.
- *Funding Approach*: Moving away from the residual financing principle for environmental protection activities.

Addressing these challenges necessitates the adoption of modern tools for environmental policy implementation, innovative approaches to production and economic processes, and the revitalization of technical and technological resources.

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Authors' Declarations and Essential Ethical Compliances

Authors' Contributions (in accordance with ICMJE criteria for authorship)

<i>Contribution</i>	<i>Author 1</i>	<i>Author 2</i>	<i>Author 3</i>	<i>Author 4</i>	<i>Author 5</i>
Conceived and designed the research or analysis	Yes	Yes	Yes	Yes	Yes
Collected the data	No	No	Yes	Yes	Yes
Contributed to data analysis & interpretation	Yes	Yes	Yes	Yes	No
Wrote the article/paper	Yes	Yes	Yes	Yes	Yes
Critical revision of the article/paper	Yes	Yes	Yes	Yes	Yes
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Research involving human bodies or organs or tissues (Helsinki Declaration)

The author(s) solemnly declare(s) that this research has not involved any human subject (body or organs) for experimentation. It was not a clinical research. The contexts of human population/participation were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or ethical obligation of Helsinki Declaration does not apply in cases of this study or written work.

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principles of the Convention on Biological Diversity and the Convention on the Trade in Endangered Species of Wild Fauna and Flora.

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(Optional) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)

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