



## ARTICLE REVIEW



## DAMAGE TO HUMAN LIFE AND HEALTH AS A SOCIALLY DANGEROUS CONSEQUENCE OF UNLAWFUL IMPACT ON THE ENVIRONMENT ON THE EXAMPLE OF UKRAINE AND THE EU

## DANOS À VIDA E À SAÚDE HUMANAS COMO CONSEQUÊNCIA SOCIALMENTE PERIGOSA DE IMPACTO ILEGAL NO MEIO AMBIENTE, A EXEMPLO DA UCRÂNIA E DA UE

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**ABSTRACT**

**Purpose:** To investigate the current criminal legislation regarding liability for environmental violations through the lens of threats to human life and health and conduct a comprehensive analysis of statistical data in the field of criminal law protection of the environment.

**Methodology/approach:** The methodological basis and research tool of this study are the main principles and methods of the theory of scientific cognition. The dialectical method facilitated the identification and detection of contradictions within the object of cognition, establishing the regularities of existence and development trends of criminally punishable offenses against the environment.

**Originality/Relevance:** The article emphasize the importance of a comprehensive approach to the protection of human life as an integral part of the environment and underline the necessity of adapting national legislation to international environmental standards.

**Key findings:** The article calls for strengthening criminal liability for environmental crimes, especially in the context of modern challenges, particularly military aggression.

**Theoretical/methodological contributions:** The methods for determining environmental damage caused by illegal human activity, including military aggression, need to be improved. In this regard, it is seen as promising to divide the harm caused to the environment into direct ecological damage and damage to human life and health.

**Keywords:** Criminal liability. Criminal offense. Environment. Protection of human life and health. Environmental objects. Crime indicators. European legislation.



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## RESUMO

**Objetivo:** Investigar a legislação penal atual sobre responsabilidade por violações ambientais sob a ótica das ameaças à vida e à saúde humanas e conduzir uma análise abrangente de dados estatísticos no campo da proteção penal do meio ambiente.

**Metodologia/abordagem:** A base metodológica e o instrumento de pesquisa deste estudo são os princípios e métodos fundamentais da teoria da cognição científica. O método dialético facilitou a identificação e a detecção de contradições no objeto de cognição, estabelecendo as regularidades de existência e as tendências de desenvolvimento de infrações penais contra o meio ambiente.

**Originalidade/Relevância:** O artigo enfatiza a importância de uma abordagem abrangente para a proteção da vida humana como parte integrante do meio ambiente e destaca a necessidade de adaptar a legislação nacional aos padrões ambientais internacionais.

**Principais conclusões:** O artigo pede o fortalecimento da responsabilidade criminal por crimes ambientais, especialmente no contexto dos desafios modernos, em especial a agressão militar.

**Contribuições teóricas/metodológicas:** Os métodos para determinar os danos ambientais causados por atividades humanas ilegais, incluindo agressões militares, precisam ser aprimorados. Nesse sentido, considera-se promissor dividir os danos causados ao meio ambiente em danos ecológicos diretos e danos à vida e à saúde humana.

**Palavras-chave:** Responsabilidade penal. Infração penal. Meio ambiente. Proteção da vida e da saúde humana. Objetos ambientais. Indicadores de criminalidade. Legislação europeia.

## 1 INTRODUCTION

Article 50 of the Constitution of Ukraine guarantees everyone the right to an environment safe for life and health. This right belongs to the third generation of human rights and freedoms, which emerged in response to global problems that intensified in the second half of the 20th century, such as environmental crises and the need for cooperation in addressing common challenges.

Environmental offenses cause growing concern and inflict significant harm on the environment, thereby affecting the health of citizens and the economy both in Ukraine and worldwide. According to the European Commission, the annual growth rate of environmental crimes is between 5-7%, with annual losses from this type of crime exceeding 80-230 billion euros. Violations of environmental regulations, deterioration of habitats, illegal transportation or dumping of waste, and pollution of air, soil, and water bodies are becoming increasingly



threatening in both Ukraine and globally. Furthermore, the full-scale invasion of the Russian Federation has further exacerbated the problem of ensuring the right of Ukrainian citizens to a safe environment and the protection of their life and health. Specifically, as a result of the destruction of approximately 40,000 units of Russian military equipment, over 700,000 tons of waste and 70,000 tons of emissions have been released into the atmosphere. Attacks on large industrial enterprises pollute the air and soil with toxic and other hazardous substances, while detonations and explosions of various types of munitions cause most of the fires that lead to the destruction of biodiversity and vegetation (Polukarov, Kachynska, Polukarov, Zemlyanska, Mitiuk, 2024). Thus, environmental terrorism, ecocide, and sabotage have become among the main threats to the environment in Ukraine today, which also affect human health and life. In this context, establishing criminal liability for environmental violations remains one of the effective legal means of protecting human life and health as an integral part of the natural environment suffering from these offenses.

To investigate the current criminal legislation regarding liability for environmental violations through the lens of threats to human life and health and conduct a comprehensive analysis of statistical data in the field of criminal law protection of the environment.

## 2 THEORETICAL FRAMEWORK

### 2.1 Results

The most significant environmental disasters of the 20th and 21st centuries, such as the Chernobyl catastrophe (1986), the oil spill in the Gulf of Mexico (2010), the explosion at the oil refinery in Hungary (2010), the Fukushima-1 nuclear power plant accident (2011), and others, have once again confirmed the inseparable link between environmental safety and the protection of human life and health. Human life and health are considered as derivative consequences of environmental offenses, as stipulated in Chapter VIII of the Special Part of the Criminal Code of Ukraine, "Criminal Offenses Against the Environment". This means that the basis for criminal liability for violations of environmental protection rules is the creation of danger to human life or health, or the infliction of actual harm to these interests (Wirtu, Abdela, 2025).

Considering the value of human life and health for the state and society, the importance of maintaining a normal and quality state of the environment, and the severity of consequences of its violation, the Ukrainian legislation has provided for two types of socially dangerous consequences, namely actual harm to protected objects (material consequences) and the creation of a threat of such harm (non-material consequences). These consequences also include harm to human life and health in any form.

A separate consideration should be given to the harm caused to the environment and, accordingly, to human life and health through the armed aggression of the Russian Federation against sovereign Ukraine. For instance, by the Resolution of the Cabinet of Ministers of Ukraine No. 326-2022-p dated 20 March 2022, the procedure for determining damages caused by the military actions of the Russian Federation was established. The methodology for assessing damage to land and water resources, mineral resources, atmospheric air, and forest funds outlined in this resolution cannot be considered flawless. As scholars note, this methodology does not take into account a number of international and European recommendations, resulting in an environmental damage assessment system that exceeds international estimates (including those by RDNA2) by a factor of 30 (Vlasenko, 2024). At the same time, it should be acknowledged that it is practically impossible to precisely calculate the ecological damage to Ukraine's future at this time in absolute figures, which significantly complicates both the identification of environmental



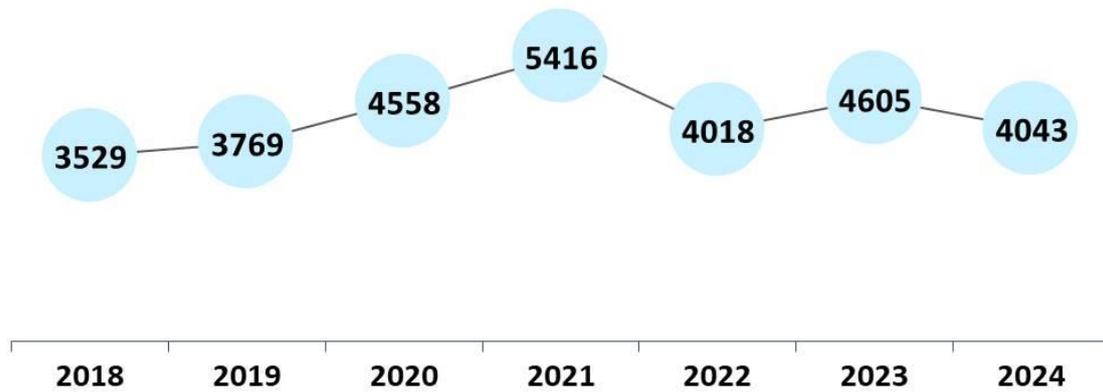
threats and the calculation of damages caused by the armed aggression of the Russian Federation (Kupriianova, Kupriianova, 2023). For example, in just 18 months of the Russian invasion, approximately 150 million tons of greenhouse gases were released into the atmosphere, which will undoubtedly influence global climate change in the short and medium term (Polukarov, Kachynska, Polukarov, Zemlyanska, Mitiuk, 2024). The damage to the Nord Stream gas pipeline, besides the direct costs of accident elimination, creates threatening phenomena for the marine flora and fauna of the region in the future.

The creation of a threat to human life and health, as a type of socially dangerous consequence of offenses against the environment, disrupts the safety complex of human vital activity, which in turn creates a real threat to the objects protected by criminal law. The creation of danger to human life, health, or the environment should be understood as such changes in the state of the environment that result in a real danger to the life or health of at least one person, mass diseases among people, infection of at least one person with an epidemic or infectious disease, reduction in life expectancy or immune protection of people, developmental abnormalities in children, as well as a real danger of harm (occurrence) to other interests specified in the relevant criminal statutes (Gillett, 2024). This influences the choice of medical measures and means to ensure the protection of human life and health.

Unlike the threat of harm, actual harm in crimes against the environment consists of the direct infliction of damage to the interests defined by law, in particular in the form of death of people, mass illnesses, or severe damage to the environment. Judicial and investigative practice under Articles 236-241, 245, and 252 of the Criminal Code of Ukraine recognizes the loss of at least one human life as a fatal outcome. In turn, the term “severe consequences”, depending on the specifics of the criminal law provision, should be understood as death or mass illness of people; significant deterioration of the ecological situation in a particular region (locality); disappearance, mass death, or severe illness of animal and plant species; loss of biodiversity; depletion of water resources; pollution of atmospheric air; the impossibility of restoring certain natural objects or using natural resources in a particular region over a long period; genetic alteration of certain natural objects; infliction of material damage on an especially large scale, etc.

As already noted, it remains difficult today to assess the overall harmful impact on the environment in Ukraine due to the additional factor of military aggression against Ukraine. As of early 2025, more than 7,500 cases of environmental violations causing damage amounting to 82 billion euros have been recorded in Ukraine. Nearly 25% of Ukraine’s territory is contaminated with explosive substances, 557 mines remain under occupation and lack proper maintenance (Pazvantoğlu, 2025). Ten national parks, eight nature reserves, and two biosphere reserves are under occupation, leading to their damage.

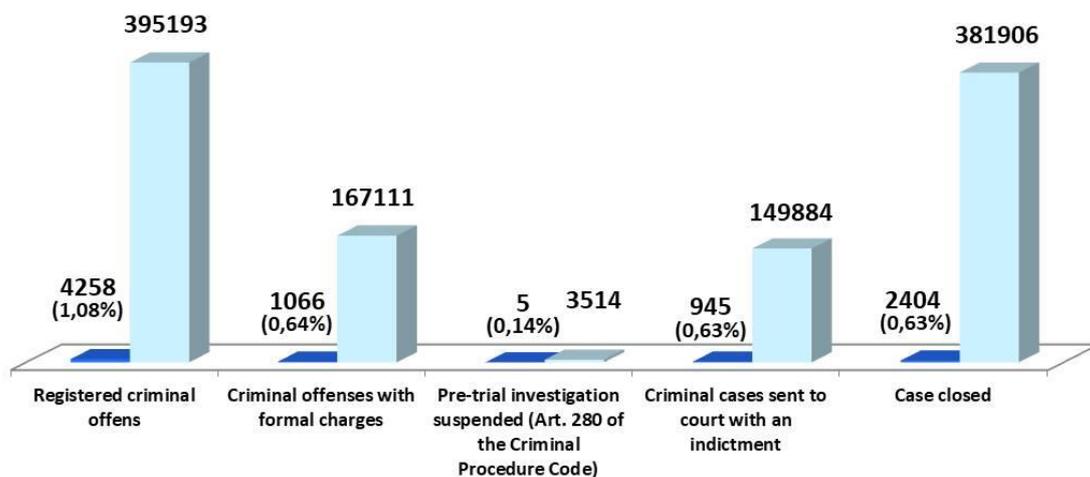
A somewhat different situation was observed in the years preceding Russia’s full-scale invasion of sovereign Ukraine on 24 February 2022. A comparative analysis of the numerical indicators of registered criminal offenses against the environment (where the consequences involve harm to human life and health) for the period 2018–2024 (based on materials from the Office of the Prosecutor General of Ukraine) shows that the level of this type of crime has been systematically increasing. According to Figure 1, there is an annual increase in the number of registered criminal offenses against the environment up to 2022. With the onset of war and the occupation of part of Ukraine’s territory, a certain decrease in the quantity of this official statistical data appears natural. However, it is not yet possible to determine the types and extent of damages inflicted by Russia on Ukraine, as the aggression is still ongoing.



**Figure 1.** Quantitative Indicators of Registered Criminal Offenses Against the Environment for the Period 2018–2024.

At the same time, the data indicates a relatively low ratio of registered criminal offenses against the environment in relation to the total number of registered criminal offenses, averaging 1.13%. The lowest ratio was recorded in 2018 (0.72%), while the highest was in 2021 (1.68%). This reflects the relatively low effectiveness of law enforcement in combating environmental offenses and the minimal number of officially registered violations.

In this context, it is also important to analyze the progress of pre-trial investigations into environmental crimes at key stages, compared to similar indicators for the total number of criminal offenses (see Figure 2).



**Figure 2.** Quantitative Indicators of Individual Procedural Stages of Environmental Criminal Investigations and Their Ratio to the Total Number of Registered Criminal Offenses for the Period 2018–2022

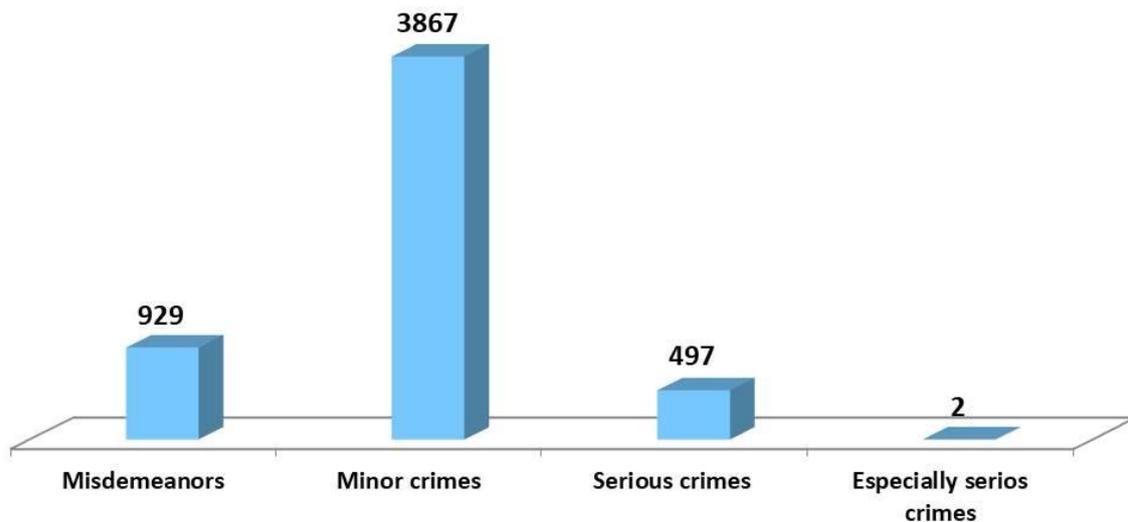
The data under investigation clearly demonstrate that the average numerical indicators for various procedural stages of pre-trial investigation of environmental crimes are exceptionally low compared to similar indicators for the total number of criminal offenses in the period from 2018 to 2022 (Baulin, Khavroniuk, 2024). Thus, it must be stated that the effectiveness of the investigation and referral of environmental crimes to court is almost two times lower compared to the total number of registered criminal offenses.

Analyzing the average indicators of registered environmental crimes under Chapter VIII

of the Special Part of the current Criminal Code of Ukraine allows us to identify which environmental offenses are the most and least prevalent (average indicator of registered criminal cases for the period from 2018 to 2022). For instance, Art. 236 stands at 0.85%, Art. 237 at 0.02%, Art. 238 at 0.1%, Art. 239 at 4.79%, Art. 239-1 at 1.38%, Art. 239-2 at 0.52%, Art. 240 at 10.92%, Art. 240-1 at 2.04%, Art. 241 at 2.03%, Art. 242 at 1.94%, Art. 243 at 0.08%, Art. 244 at 0%, Art. 245 at 0.7%, Art. 246 at 55.98%, Art. 247 at 0.11%, Art. 248 at 1%, Art. 249 at 13.88%, Art. 250 at 0%, Art. 251 at 0.1%, Art. 252 at 0.62%, Art. 253 at 0%, and Art. 254 at 2.91%.

Analysis of these figures shows that the most widespread environmental offenses are those outlined in Art. 246 – Illegal felling or illegal transportation, storage, or sale of timber, while those that are entirely absent include Art. 244 – Violation of the laws on the continental shelf of Ukraine; Art. 250 – Conducting explosive work in violation of fishery protection rules; and Art. 253 – Design or operation of facilities without environmental protection systems. However, it is important to note that this analysis only refers to registered criminal offenses.

The degree of severity of a criminal offense is an important characteristic of a specific type of offense. It not only defines the legal consequences of a committed criminal act but also influences the type and extent of the punishment assigned for the offense. Through empirical analysis, it was established that, from 2018 to 2022, the distribution of criminal offenses according to severity was as follows: misdemeanors – 22.92%; minor crimes – 69.43%; serious crimes – 7.63%; and especially serious crimes – 0.03%. Thus, it was found that the most common offenses, as outlined in Section VIII of the Criminal Code of Ukraine, “Criminal Offenses Against the Environment”, were minor crimes (13,547 criminal offenses against the environment), while the least common were especially serious crimes (only 6 such offenses). These general data are corroborated by the analysis of the 2021 statistics, which showed the highest numbers for that year. According to these figures, the largest number of criminal offenses against the environment in 2021 were: minor crimes – 3,867 (73%); misdemeanors – 929 (17.5%); serious crimes – 497 (0.4%); and especially serious crimes – 2 (0.04%) (see Figure 3).



**Figure 3.** Indicators of Registered Environmental Criminal Offenses by Severity in 2021

Studying the impact of the law enforcement agencies in Ukraine on the detection,



investigation, and prevention of criminal offenses against the environment, which, in turn, harm human health, the most informative aspect in terms of their work is conducting a detailed analysis of the effectiveness of investigations in this group of criminal acts, depending on the key procedural stages of the pre-trial investigation (see Figure 2). The diagram indicates that only one out of every five cases related to environmental safety violations was brought to court.

As an equal participant in international relations, Ukraine has certain rights and obligations. However, in order for these rights and obligations to be implemented at the state level, they must be ratified by the highest legislative body – the Verkhovna Rada of Ukraine. After that, legal acts are incorporated into national legislation and acquire the force of national law. One of Ukraine's goals in international relations is its aspiration to become a member of the European Union (EU) (Shevchuk, Zatenatskyi, Matulienė, 2024). This necessitates aligning national legislation with international law by making amendments, additions, or even repealing legal norms that do not correspond to democratic society ideals. In other words, it involves adapting national legislation to international standards or the legislation of other countries. This also applies to criminal offenses against the environment (**European Union, 2021**).

According to Article 37 of the Charter of Fundamental Rights of the European Union, a high level of environmental protection and the improvement of environmental quality must be integrated into EU policies and ensured in accordance with the principle of sustainable development. In turn, the Council of Europe Convention on the Protection of the Environment through Criminal Law, dated 4 November 1998, emphasizes the need to establish criminal liability for environmental offenses. It should be noted that the issues related to violations of environmental safety, which result in harm to human life and health, are transboundary and geopolitical.

In 2024, Directive (EU) 2024/1203 of the European Parliament and Council on the protection of the environment through criminal law was adopted, replacing Directives 2008/99/EC and 2009/123/EC on this matter. The Directive introduces changes in the approach to criminal liability for environmental offenses. A key innovation for the current national legislation is the criminalization of certain actions that harm the environment, which are committed not only intentionally but also through negligence. Article 3 of the Directive lists actions that may be committed in the form of negligence and carelessness.

A problem within European legislation concerning the protection of the natural environment is the reluctance to strengthen liability for such actions. For European legislation, the key principle remains the adherence to the proportionality of punishment, rather than the effectiveness of combating negative phenomena. As stated in the Directive, the punishment for environmental offenses should be equivalent to the minimum level of the maximum prison term for individuals. The maximum prison terms stipulated by this Directive for criminal offenses committed by individuals should only apply to the most serious forms of such offenses, specifically those related to the loss of life or causing serious bodily harm. In this context, the European Commission's search for alternatives to criminal punishment, such as measures related to environmental restoration, compensation payments, fines, deprivation of access to state funding, temporary bans on holding public office, and the publication of judicial decisions with reference to the participants in the offense, seems understandable (Killean, 2025).

Another constructive feature of European environmental legislation is that it is based on norms characterized by their blanket nature. That is, they refer to other legal norms, other branches of law. This also applies to Directive (EU) 2024/1203. These norms refer to the corresponding Regulations that govern environmental relations. For example, according to European legislation, actions should be criminalized if their commission is restricted by Regulation (EC) No. 1907/2006 of the European Parliament and Council (this Regulation aims to regulate the production, marketing, and use of chemicals and chemical products within the EU) (points (i, ii) of Article 3 of the Directive); Regulation (EC) No. 1107/2009 of the European Parliament and Council (point



(iii) of Article 3 of the Directive) (this Regulation establishes rules for the approval of plant protection products in commercial form and their placing on the market, use, and control); Regulation (EC) No. 528/2012 of the European Parliament and Council (point (iv) of Article 3 of the Directive) (the BPR Regulation aims to improve the functioning of the biocidal product market in the EU, ensuring a high level of protection for humans and the environment); Regulation (EC) No. 1272/2008 of the European Parliament and Council (point (v) of Article 3 of the Directive) (the goal of the Regulation is to ensure a high level of protection for human health and the environment); Regulation (EU) 2019/1021 (the purpose of this Regulation is to protect human health and the environment from persistent organic pollutants) (point (vi) of Article 3 of the Directive), and others (Rodríguez Goyes, Nariño (et al.), 2021).

The protection of human life and health in the European legal framework intersects significantly with environmental protection, specifically its individual components. For example, according to paragraph 8 of the preamble to the above-mentioned Directive (EU) 2024/1203, it is stated that within the framework of the common fisheries policy, EU legislation provides a comprehensive set of rules for control and enforcement in accordance with Council Regulations (EU) No. 1224/2009 and No. 1005/2008 to counteract damage to the marine environment. According to these provisions, member states are given the option to apply administrative or criminal sanctions, or both, depending on the extent of the harm that may be caused to the environment.

On 11 December 2019, European Commission President Ursula von der Leyen officially presented the document titled “The European Green Deal (EGD)” in the European Parliament. It proposed the foundation for transitioning to a modern, resource-efficient, and competitive economy, taking into account environmental requirements as well as those related to the protection of human life and health (De Nardin Budó, 2024). The key areas of the European Green Deal include clean energy, climate action, construction and renovation, sustainable industry, sustainable mobility, reducing environmental pollution, biodiversity, sustainable agricultural policy, and the necessary positive changes on a global scale. Thus, the European Green Deal has set out milestones and priorities that are significant far beyond the European Union.

In addition, on 14 June 2021, the European Climate Law came into force. As a result, the European Commission adopted a legislative initiative package titled “Fit for 55”, aimed at aligning EU policies in the fields of climate, energy, transport, land use, and taxation with the requirements of this Law, to achieve a 55% reduction in greenhouse gas emissions by 2030 (compared to 1990 levels) (Wei, Oliveira, Rodríguez, 2025). The EU also adopted and developed the EU Biodiversity Strategy for 2030, the EU Forest Strategy, the new EU Strategy for Adaptation to Climate Change, strategies related to soils, plastics, chemicals, Action Plans for Zero Pollution, Circular Economy, Organic Production, and established the EU emissions trading system for energy, aviation, shipping, and land transport, as well as the Carbon Border Adjustment Mechanism and the Climate Social Fund (Mushoriwa, 2024).

Regulation (EU) 2023/1115 on the placing on the Union market and export from the Union of certain raw materials and goods linked to deforestation and forest degradation. This regulation sets rules for the placement and availability of products listed in Annex I on the Union market, as well as their export from the Union, which contain, have been fed with, or have been made using the corresponding goods, such as cattle, cocoa, coffee, palm oil, rubber, soy, and timber (Najafli, 2024). The goal is to minimize the Union's contribution to deforestation and forest degradation worldwide, thereby contributing to the reduction of global forest destruction (Article 1). The penalties imposed concern operators providing the relevant services and are aimed at deterring such activities (Suprayogi, 2025). All of this indirectly negatively impacts human life and health and, accordingly, should be regulated not only by civil law measures but also primarily by criminal law provisions.

Amid the aforementioned changes, it is impossible to overlook the developments within



the Ukrainian legal framework concerning environmental protection and its broader impact on human life and health. In the draft of the new Criminal Code of Ukraine, criminal offenses against environmental safety are proposed to be categorized into two sections, each focusing on different objects of legal protection. The first is Section 5.3 of Book 5, “Criminal Offenses Against Public Health”, and the second is Section 6.5 of Book 6, “Criminal Offenses Against the Economy”, where provisions are outlined to establish liability for offenses against the environment, specifically “Criminal Offenses Related to the Use of Natural Resources”. The authors of the draft proceed from the idea that environmental crimes differ depending on the nature of the harm they cause (Branch, Minkova, 2023). The first type of offenses violate the proper quality of the environment. At the same time, a derivative object that also suffers from violations of the qualitative and quantitative indicators of the environment is public health and human life, since in polluted environments, there is a threat to the health and even lives of an indefinite number of people. The second type of offenses, in turn, targets the order of natural resource use, unlawfully reducing the quantity or volume of environmental objects through their unlawful destruction or unlawful appropriation. This perspective seems reasonable and worthy of support. Indeed, as an inseparable part of the surrounding natural environment, humans also incur harm to their own life and health through their socially dangerous and unlawful actions against nature.

In this context, the position of European legislators is crucial, as it introduces a broad approach to the concept of a victim, extending it not only to natural or legal persons but also to society as a whole and the environment. Since the environment cannot be considered a victim in criminal proceedings, representatives of the interested public should be able to act on behalf of the environment as a public good, in accordance with national legislation and relevant procedural norms. This approach, as outlined in Directive 2012/29/EU of the European Parliament and Council, ensures that the rights of interested public representatives do not infringe on the rights of victims. Furthermore, the terms “representatives of the interested public” and “victims” must remain distinct, and member states should not be required to apply victim rights to public representatives. While European law recognizes legal entities and public representatives as victims in environmental crimes, this is not currently feasible within Ukrainian national legislation. Therefore, a promising direction for future scientific inquiry lies in the development of a procedural mechanism that allows public participation as a representative of the environment in fulfilling the role of a victim in criminal offenses against the natural environment.

### 3 METHOD

The methodological foundation of this study is grounded in the fundamental principles of the theory of scientific cognition, ensuring both theoretical rigor and empirical validity. A dialectical method was employed to identify contradictions within the legal regulation of environmental crimes, enabling the detection of developmental trends and systemic patterns in criminal law protection of the environment (Higgins, Short, & South, 2013; Panigaj & Berníková, 2023).

The comparative-legal method facilitated a cross-jurisdictional analysis between the Criminal Code of Ukraine and the legislative frameworks of the European Union, with a particular focus on the Environmental Crime Directive (Directive (EU) 2024/1203) and evolving international legal approaches to ecocide (Wirtu & Abdela, 2025; European Commission, 2025). This approach made it possible to highlight both convergences and discrepancies in criminal liability for environmental offenses across legal systems.

The structural and systemic analysis method was applied to clarify the content and composition of environmental crimes as a legal and social construct, establishing the internal



interconnections that determine the causality of harm to human life, health, and ecosystems (Higgins et al., 2013).

In addition, empirical data collection and analysis was based on the examination of official documents (e.g., statistical reports of the Office of the Prosecutor General of Ukraine, judicial decisions, and government reports) and relevant international legal acts. The criteria for selecting documents included: (1) relevance to environmental criminal law and ecocide; (2) publication period between 2021 and 2025 for international sources; (3) availability of official statistical and legal data; and (4) reliability of publication channels (peer-reviewed journals, official government and EU portals). Unofficial materials (such as policy briefs and NGO reports) were used only for supplementary contextualization and were critically assessed against official data (Snitko & Zolotarova, 2023; Wirtu & Abdela, 2025).

At the same time, this study acknowledges its limitations: (1) empirical data is largely drawn from Ukrainian legal and institutional practice, which may restrict the generalizability of findings to other jurisdictions; (2) the availability of international statistical data on environmental crimes remains limited; and (3) the rapidly evolving discourse on ecocide in international law creates interpretive challenges, as many legal standards are still in the process of formation. Nevertheless, the combination of dialectical, comparative-legal, and structural methods, supported by the integration of both national and international sources, provides a comprehensive framework for analyzing the criminal law protection of the environment in Ukraine within the broader European and global context.

#### 4 DISCUSSION

Due to the harm caused to the environment by anthropogenic activities, as well as the criminal neglect of nature conservation, human health is compromised, leading to an increase in mortality rates. This necessitates the implementation of effective mechanisms to counteract these negative phenomena, such as technical, organizational, medical, and legal measures. One such mechanism is the introduction of criminal liability as the most severe form of legal responsibility. In this context, it is prudent to adopt a dual approach to criminal legal protection of the environment, as well as human life and health as a derivative object of protection, as proposed in the draft of the new Criminal Code of Ukraine. This approach could also be applied within the European environmental protection system and, consequently, in safeguarding human life and health.

An important aspect is the impact on human life and health caused by environmental harm during wars, armed conflicts, and military operations. The war initiated by the Russian Federation against sovereign Ukraine has inflicted irreversible damage on Ukraine's environment, increasing its vulnerability to natural disasters and exacerbating problems caused by climate change. The consequences of the military actions—both immediate and long-term—pose a serious threat to ecosystems, human health, and overall security, affecting not only Ukraine but the entire European continent.

As of the beginning of 2025, over 7,500 environmental offenses have been recorded, resulting in damages amounting to 82 billion euros. The destruction of the Kakhovka dam, the poisoning of the Seim River, the large oil spill in the Kerch Strait caused by the accidents of Russian tankers “Volgoneft-212” and “Volgoneft-239”, and the semi-destroyed state of the Chernobyl confinement are among the most significant damages we have witnessed. Furthermore, nearly 25% of Ukraine's total territory is contaminated with explosive substances, 557 mines are under occupation and lack proper maintenance. Ten national parks, eight nature reserves, and two biosphere reserves are also under occupation. A total of 744 water management facilities have



been damaged, with an estimated 7.7 billion euros needed for their restoration. Consequently, calls from the scientific community to include ecocide in the international criminal justice system have become louder, especially through amendments to the Rome Statute (Wirtu, Abdela, 2025). However, challenges remain, such as establishing clear definitions and ensuring international consensus on the concept of ecocide (Panigaj, Berníková, 2023).

Compliance with environmental laws is not just about avoiding problems; it is actually a smart move for businesses. Increased accountability also directly affects corporate programs that require the implementation of environmentally sound diligence, internal, and transparent reporting mechanisms. By using the right environmental laws, companies are seriously considering whether they are eco-friendly, which helps them maintain their good name, avoid financial problems, and stay in the game.

In addition, companies are now more than ever relying on competitive intelligence to keep track of regulatory trends, whether at the EU level or country by country. This establishes a direct link between who is responsible for crimes, how they will be treated by the justice system, and achieving the UN's goals for a better world. Criminal protection of the environment goes beyond legal boundaries and becomes a catalyst for sustainable development, environmental innovation, and responsible investment policies in both Ukraine and the EU.

## **Practical Implications**

The findings of this study have significant practical relevance for legislators, legal practitioners, and environmental protection specialists. First, the comparative-legal analysis of Ukrainian and EU legislation provides an evidence-based foundation for harmonizing national criminal law with international standards in the field of environmental protection. This can assist policymakers in drafting amendments to the Criminal Code of Ukraine that ensure stronger liability for environmental crimes, including ecocide.

Second, the system-structural analysis of environmental crimes highlights causal relationships between ecological damage and risks to human life and health, offering legal practitioners clearer frameworks for qualifying criminal offenses. This may enhance prosecutorial practice and judicial decision-making in environmental cases.

Third, the integration of statistical and empirical data provides environmental protection agencies and NGOs with reliable indicators to monitor enforcement gaps and assess the effectiveness of compliance policies. These insights can guide targeted reforms in law enforcement, capacity-building programs for prosecutors and judges, and cross-sector cooperation mechanisms.

Finally, the study emphasizes the role of international cooperation, particularly through the adoption of EU directives and conventions, in strengthening Ukraine's institutional capacity to combat environmental crimes. Such recommendations may serve as a roadmap for aligning domestic practice with European Green Deal objectives and global ecocide prevention initiatives.

## **5 CONCLUSIONS**

In conclusion, the following points should be noted.

A person is an integral part of the environment, so their existence, as well as the safety of their life and health, are directly related to the functioning of the environment itself and its individual components, which requires appropriate protection from the state.

Ensuring various life indicators and the state of human health occurs not only through



medical means but also through other organizational, technical, and legal measures, including the implementation of relevant actions. In this context, criminal-legal protection of the environment is one of the most effective legal tools for safeguarding the rights and freedoms of citizens to a safe environment, as guaranteed by the Constitution.

The methods for determining environmental damage caused by illegal human activity, including military aggression, need to be improved. In this regard, it is seen as promising to divide the harm caused to the environment into direct ecological damage and damage to human life and health.

Criminal liability for violations of environmental legislation should be viewed not only as a mechanism for protecting human life, health, and ecosystems, but also as an important factor in shaping corporate governance and sustainable competitiveness. Aligning Ukrainian legislation with EU standards will encourage companies to implement proactive compliance strategies, anticipate changes in environmental legislation, and strengthen their resilience to global crises. This approach ensures that criminal environmental law will simultaneously contribute to environmental protection, risk management, and the strategic positioning of organizations in international markets.

Military actions occurring on the territory of Ukraine have a significant impact on the state of the environment, and consequently, on human life and health, causing irreversible negative effects on environmental objects. The effectiveness of countering these threats requires the involvement of the international community and the establishment of a special tribunal to address war crimes related to the harm caused to the environment.

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