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INTERNATIONAL COOPERATION IN COMBATING ENVIRONMENTAL CRIME

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Abstract: *This study examines the mechanisms of international cooperation in the prevention and suppression of environmental crime, an emerging form of transnational criminality with a significant impact on the environment, the economy, and public health. It analyzes the main forms of environmental crime, the international and European legal framework, the role of organizations such as the United Nations, Europol, and Eurojust, as well as major challenges, including legislative disparities, insufficient resources, corruption, evidentiary difficulties, and the involvement of organized crime. The paper highlights the need for legislative harmonization, specialization of competent authorities, and the use of modern technologies. The conclusions emphasize current trends toward strengthening criminal liability and developing the concept of ecocide. The article is intended for specialists in criminal law, environmental law, and international relations.*

Keywords*: environmental crime; international cooperation; environmental law; European Union; Europol*

1. Introduction

Environmental protection has become one of the fundamental concerns of the international community in the twenty-first century. The intensification of pollution, the excessive exploitation of natural resources, illegal waste trafficking, unlawful logging, and the illicit trade in protected species have led to the emergence of a distinct form of criminal activity known as environmental crime. This phenomenon is no longer merely a domestic issue for individual states but a global threat affecting ecosystems, economies, and public health worldwide (Duțu, 2022, p. 421).

The cross-border nature of most environmental offences requires the development of effective mechanisms of international cooperation. Criminal activities are often organized through networks operating simultaneously in several states, taking advantage of legislative differences and coordination difficulties among national authorities. In this context,

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international judicial and law-enforcement cooperation has become an indispensable instrument for preventing and combating environmental crime (Cioclei, 2023, p. 587).

This study aims to analyze the main forms of international cooperation in combating environmental crime, the applicable international and European legal framework, the role of international organizations, and the challenges currently faced in this field.

2. The Concept and Characteristics of Environmental Crime

Environmental crime encompasses all unlawful acts that harm the environment and natural resources and are sanctioned under criminal or administrative law. According to the United Nations Environment Programme (UNEP), environmental crime is among the most profitable criminal activities worldwide (UNEP, 2016, p. 7).
The main forms of environmental crime include:

- illegal pollution of air, water, and soil;
- illegal trafficking of waste;
- unlawful logging activities;
- illegal fishing;
- illicit trade in protected species;
- illegal exploitation of mineral resources;
- violations of regulations concerning hazardous substances (Duțu, 2022, p. 427).

A distinctive feature of these offences is that their consequences often manifest over a long period of time and extend beyond the borders of the state where they were committed. For example, pollution affecting a river may impact several riparian states, while illegal waste trafficking frequently involves complex international transportation routes (Boroi, 2021, p. 38).
From a criminological perspective, another challenge lies in assessing environmental damage, which cannot be reduced to a simple financial valuation and requires interdisciplinary methods of expertise (Boroi, 2021, pp. 47-49).

3. The Need for International Cooperation in Combating Environmental Crime

Economic globalization and the development of transportation networks have facilitated the transnational expansion of environmental crime. Criminal organizations exploit legislative disparities and the absence of uniform control mechanisms to conduct highly profitable illegal activities (Boroi, 2021, p. 38).
International cooperation is necessary for several reasons.

First, many environmental offences involve multiple jurisdictions. Waste may be generated in one state, transported through several others, and ultimately disposed of illegally in a third country.

Second, identifying offenders requires the rapid exchange of information among competent authorities.

Third, environmental damage frequently affects interests shared by humanity as a whole, such as biodiversity, climate stability, and marine resources (Sands, 2018, p. 911).

Without international cooperation, the effectiveness of enforcement measures would be significantly reduced, and offenders could take advantage of coordination difficulties between states.

This conclusion is confirmed by recent practical examples, including the transboundary trafficking of electronic waste between Europe and Africa or Southeast Asia, which demonstrate the inability of states to address such phenomena effectively through unilateral action alone (INTERPOL, UNEP reports, 2022).

4. International Legal Framework for Combating Environmental Crime

4.1. The Basel Convention

One of the most important international instruments is the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, adopted in 1989 (Basel Convention, 1989). The Convention establishes the obligation of states to control the movement of hazardous waste and to prevent its export to countries that lack the capacity to manage such waste safely.
Despite these provisions, significant illegal exports continue to occur in practice, and recent amendments to the Convention seek to include plastic waste within the scope of the controlled regime (Amendment Basel Convention, 2021).

4.2. The CITES Convention

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) constitutes the principal legal instrument for combating the illegal trade in protected species (CITES, 1973). It seeks to restrict trade that may threaten the survival of species through a system of permits and certificates.

4.3. The United Nations Convention against Transnational Organized Crime

Although not specifically dedicated to environmental protection, the Palermo Convention provides important mechanisms for combating criminal groups involved in environmental crime (UNTOC, 2000) by facilitating extradition, mutual legal assistance, and the confiscation of criminal proceeds.

However, the application of the Convention to environmental offences remains limited due to the requirement of dual criminality and the lack of uniform definitions of unlawful activities (Sands, 2018, p. 919).

5. The Role of the United Nations

The United Nations plays a fundamental role in the development of international environmental protection standards. Through the United Nations Environment Programme (UNEP) and other specialized bodies, the UN promotes:

- harmonization of legislation;
- exchange of information;
- development of institutional capacities;
- training programmes for law-enforcement authorities (UNEP, 2019, p. 95).

In recent years, the United Nations has repeatedly emphasized the link between environmental crime, corruption, and transnational organized crime.

A notable initiative is the "Wild for Life" campaign, as well as the support provided to the International Network for Environmental Compliance and Enforcement (INECE), which facilitates cooperation among authorities involved in combating environmental offences.

6. Cooperation within the European Union

The European Union has developed one of the most advanced systems for combating environmental crime.

A significant milestone was the adoption of Directive 2008/99/EC on the protection of the environment through criminal law (Directive 2008/99/EC). This instrument established minimum requirements concerning environmental offences and sanctions within the Member States.

In 2024, the European Union adopted a new directive on environmental crime, significantly expanding the list of criminal offences and introducing stricter penalties (Directive EU 2024/1203).

The new legislation aims to:

- harmonize the legislation of Member States;
- increase the effectiveness of investigations;
- strengthen the liability of legal persons;
- enhance the protection of whistleblowers.

Particular attention should be given to the fact that Directive (EU) 2024/1203 introduces the aggravated offence of "qualified environmental destruction", representing an important step towards the recognition of ecocide at the European level, even though its application remains limited to national jurisdictions.

7. The Role of Europol and Eurojust

7.1. Europol

Europol coordinates law-enforcement activities among Member States and provides operational support in complex cases of environmental crime (SOCTA, 2025).

The agency collects and analyzes intelligence concerning:

- illegal waste trafficking;
- offences against wildlife and flora;
- illegal industrial pollution;
- unlawful logging activities.

Through intelligence analysis, operational support, and the coordination of cross-border investigations, Europol contributes significantly to the detection and disruption of criminal networks involved in environmental offences.

7.2. Eurojust

Eurojust facilitates the coordination of investigations and criminal prosecutions among the judicial authorities of Member States (Eurojust report, 2025).

The agency assists in resolving complex cases involving multiple jurisdictions, particularly through the establishment and support of Joint Investigation Teams (JITs).

Furthermore, the development of the European Judicial Network (EJN) and the European Centre of Expertise for Combating Environmental Crime represents a notable advancement in strengthening international judicial cooperation in this field (CJN, Expertise Center).

8. Challenges in International Cooperation

Despite the significant progress achieved in recent decades, the effectiveness of international cooperation mechanisms in combating environmental crime continues to be affected by numerous legal, institutional, economic, and political obstacles.

The complex and transnational nature of environmental offences means that the mere existence of international agreements is insufficient to ensure an effective response by states. Differences between national legal systems, limited financial and human resources, corruption, lack of political will, and technical difficulties in conducting investigations remain major challenges to effective international cooperation.

8.1. Legislative Differences between States

One of the most significant difficulties is the lack of legislative uniformity at the international level.

Although numerous international conventions and legal instruments concerning environmental protection exist, states retain discretion regarding the way these instruments are implemented within domestic law.

As a result, considerable differences exist among national legal systems concerning the definition of environmental offences, criminal liability requirements, and applicable sanctions (Duțu, 2022, p. 438).

For example, conduct considered a serious criminal offence in one state may constitute only an administrative violation in another. Such discrepancies create difficulties in applying the principle of dual criminality, which is essential in extradition proceedings and mutual legal assistance (Sands, 2018, p. 923).

Furthermore, criminal groups may exploit legislative differences by operating in jurisdictions characterized by more permissive regulations and weaker enforcement mechanisms. This phenomenon is frequently described in legal literature as the "pollution haven" effect (Faure, 2017, p. 115).

In my view, the issue of dual criminality could be partially addressed through the adoption of common international model provisions, such as those proposed by the United Nations Office on Drugs and Crime (UNODC) for environmental offences (Faure, 2017, p. 130).

8.2. Insufficient Institutional and Financial Resources

Combating environmental crime requires specialized institutions, qualified personnel, and advanced technical equipment.

In many countries, particularly developing states, environmental protection authorities face a shortage of resources necessary to conduct complex investigations (UNEP, 2021, p. 28).

Environmental crime investigations frequently require expensive technical expertise, laboratory analyses, satellite monitoring, and cooperation among specialists from various disciplines, including biology, chemistry, geology, and forestry.

Without such resources, many offences remain undetected or cannot be adequately proven before courts (INTERPOL Report, 2023, p. 34).

Economic disparities among states also affect their ability to participate effectively in international cooperation mechanisms. States with limited resources often encounter difficulties in implementing international standards and participating in joint environmental enforcement programmes.

Although technical assistance initiatives developed by the European Union and the United Nations have sought to reduce these disparities, their impact remains limited (UNODC).

8.3. Corruption and Economic Influences

Corruption remains one of the principal factors facilitating the development of environmental crime worldwide.

Many illegal activities, including unauthorized logging, hazardous waste trafficking, and unlawful exploitation of natural resources, are enabled through the direct or indirect involvement of corrupt public officials (INTERPOL Report, 2023, p. 38).

In certain situations, criminal groups manage to obtain fraudulent permits, avoid administrative controls, or influence the outcome of investigations through corrupt practices.

This phenomenon undermines mutual trust among states and reduces the effectiveness of international cooperation mechanisms (UNODC Report, 2024, p. 67).

Economic interests may also influence the enforcement of environmental protection legislation. In some cases, national authorities refrain from imposing severe sanctions on major economic operators due to concerns regarding employment, investment, or public revenues.

Anti-corruption instruments, such as the United Nations Convention against Corruption (UNCAC), may therefore serve as complementary tools in combating environmental crime, although this relationship remains underutilized.

8.4. Difficulties in Detecting and Proving Environmental Offences

Unlike conventional crimes, environmental offences are often difficult to detect and prove. The consequences of pollution may become apparent long after the unlawful act has been committed and may occur far from the place where the offence originated. This significantly complicates the establishment of a causal link between criminal conduct and environmental damage (Boroi, 2021, p. 54).

For example, contamination of a water source may become visible only after several years, while adverse effects on public health may emerge long after the pollution event itself. In such circumstances, gathering evidence and identifying the responsible individuals become particularly challenging.

Moreover, the transnational nature of many environmental offences requires evidence to be collected across multiple jurisdictions. This necessitates effective cooperation among competent authorities and compliance with the procedural requirements of each state involved (Cioclei, 2023, p. 594).

Scientific evidence plays a crucial role in such investigations. Techniques such as DNA analysis of timber and protected species, chemical tracing of pollutants, and advanced environmental monitoring methods are increasingly used. However, these techniques involve substantial costs and require internationally recognized quality standards as they are important for probation.

8.5. Transnational Organized Crime

An increasing number of international reports highlight the involvement of organized criminal groups in activities that harm the environment.

Profits generated from illegal waste trafficking, unlawful logging, illicit trade in protected species, and illegal mining operations are often comparable to those obtained from other serious criminal activities, including drug trafficking and smuggling (UNEP & INTERPOL, Strategic Report, 2022, p. 17).

These criminal organizations employ sophisticated structures, shell companies, and international transportation networks to conceal the origin of their illegal activities.

Consequently, their investigation requires the rapid exchange of information, joint operations, and continuous cooperation among judicial and law-enforcement authorities across multiple jurisdictions.

According to the EU Serious and Organized Crime Threat Assessment (SOCTA) 2025, approximately 40 percent of organized crime networks operating in Europe are involved in at least one form of environmental crime, frequently in conjunction with drug trafficking or migrant smuggling activities (SOCTA, 2025).

8.6. Lack of Specialization among Judicial Authorities

Another important challenge is the insufficient specialization of prosecutors, judges, and criminal investigation authorities in the field of environmental crime (Duțu, 2022, p. 444).

The technical and scientific complexity of environmental cases often requires interdisciplinary knowledge that exceeds traditional legal training.

The absence of specialized structures may result in inconsistent judicial practice and the imposition of sanctions that fail to provide a sufficient deterrent effect.

For this reason, both European and international organizations promote the development of professional training programmes and the establishment of specialized units dedicated to investigating environmental offences.

In this regard, the European Judicial Training Network (EJTN) has developed specific training modules on environmental crime, while the United Nations Institute for Training and Research (UNITAR) offers online courses designed for judges and prosecutors (UNITAR, 2026).

8.7. Challenges Generated by New Technologies

Technological development creates both opportunities and risks in the field of environmental protection.

On the one hand, modern technologies facilitate the detection and monitoring of illegal activities. Satellite imagery, drones, artificial intelligence systems, and digital monitoring tools have significantly improved the ability of authorities to identify environmental offences.

On the other hand, these same technologies may be exploited by criminal groups to evade controls and conceal the origin of products derived from illegal activities (UNODC, 2023, p. 41).

The use of cryptocurrencies, encrypted communications, and complex digital networks makes it increasingly difficult to identify the ultimate beneficiaries of criminal activities and to trace financial flows generated by environmental crime.

Particular attention should also be paid to emerging threats such as the use of deep-fake technology to falsify transportation and customs documentation, as well as the growing trade in protected species through dark web platforms (emerging threats).

Global monitoring organizations such as TRAFFIC (https://www.traffic.org/what-we-do/thematic-issues/wildlife-crime/cybercrime/ , 2026) warn that, as major online marketplaces and social media platforms improve their automatic detection systems, illegal wildlife trade is likely to migrate increasingly toward the dark web. This shift may make the dismantling of criminal networks significantly more difficult because of technological barriers and jurisdictional complexities (https://wildhub.community/posts/unmasking-the-darkweb-the-hidden-world-of-illegal-wildlife-trade , 2026).

8.8. Prospects for Overcoming Existing Difficulties

Addressing these challenges requires the strengthening of international cooperation through legislative harmonization, the development of specialized institutions, and the intensification of information exchange among states.

It is equally important to increase investments in technology, professional training, and anti-corruption mechanisms (Sands, P., 2018, p. 931).

Considering recent European legislation and growing global concerns regarding climate change and biodiversity protection, environmental crime is increasingly emerging as a strategic priority for judicial and law-enforcement authorities worldwide.

National and international strategies should explicitly incorporate the Sustainable Development Goals, particularly SDG 14 (Life Below Water) and SDG 15 (Life on Land), together with measurable performance indicators for combating environmental crime (SDG integration).

9. Future Developments

The future of international cooperation in combating environmental crime is shaped by several important trends.

The first concerns the increasing use of modern technologies, including satellite imagery, drones, artificial intelligence, and advanced data analytics.

The second relates to the strengthening of information-sharing mechanisms among competent authorities.

The third involves the continuing development of the concept of ecocide and its potential recognition as an international crime (Independent Expert Panel for the Legal Definition of Ecocide, 2021).

At the same time, the role of non-governmental organizations and civil society in identifying and reporting environmental offences is becoming increasingly significant.

Another noteworthy development is the growing recognition of the rights of nature in certain jurisdictions, such as Ecuador and New Zealand. This trend may influence the future evolution of international criminal law and environmental protection mechanisms (new trend – the rights of nature).

10. Conclusion

Environmental crime constitutes one of the most serious challenges facing contemporary society. Its transnational nature makes it impossible to combat effectively through exclusively national measures.

International cooperation, achieved through multilateral conventions, international organizations, and specialized European mechanisms, represents the cornerstone of efforts to address this phenomenon.

Recent developments demonstrate a clear trend toward strengthening criminal liability for environmental offences and expanding cross-border cooperation instruments.

In the future, the effectiveness of efforts to combat environmental crime will largely depend on the harmonization of legislation, the use of modern technologies, and enhanced cooperation among national authorities and international organizations.

From a normative perspective, the adoption of an international legal framework on ecocide, whether within the jurisdiction of the International Criminal Court or through a distinct international instrument, could represent one of the most significant legal developments of recent decades.

Furthermore, the strengthening of Europol's and Eurojust's operational capacities, together with the full implementation of Directive (EU) 2024/1203 across EU Member States, will constitute crucial tests for the effectiveness of European cooperation in the fight against environmental crime.

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