

# Prosecuting Ecological Destruction: Comparative Legal Perspectives on the Crime of Ecocide

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## ABSTRACT

This article aims to analyze and compare legal frameworks addressing the crime of ecocide across various jurisdictions and assess the prospects for its codification and enforcement at the international level. A scientific narrative review method was employed using a descriptive analytical approach. The study examined legal documents, policy papers, legislative reforms, and scholarly literature published between 2018 and 2024, focusing on national and international efforts to define and operationalize ecocide. Materials were selected based on relevance to legal recognition, procedural challenges, and implementation strategies. Comparative analysis was used to highlight regional developments, legal models, and conceptual trends across European, Latin American, Asia-Pacific, African, and Anglo-American legal systems. The review reveals that while several jurisdictions have initiated legislative efforts to criminalize ecocide, there is significant variation in definitions, legal scope, and prosecutorial mechanisms. European states, particularly France, Belgium, and the Netherlands, show growing support for ecocide through national reforms and backing for international initiatives. Latin American and indigenous legal systems emphasize ecocentric values and recognize the rights of nature, providing a philosophical foundation for ecocide legislation. In contrast, Asia-Pacific and African countries face enforcement limitations due to economic dependency and institutional gaps, although some constitutional and regional frameworks offer supportive structures. Common law jurisdictions exhibit cautious progress, with civil society playing a pivotal role in advancing the discourse. At the international level, efforts to include ecocide in the Rome Statute face procedural and political barriers, yet continue to shape global environmental law debates. Ecocide is emerging as a crucial legal response to large-scale environmental destruction, but its successful implementation requires harmonized legal definitions, international cooperation, and integration into both public and corporate accountability frameworks.

**Keywords:** *Ecocide, environmental crime, international criminal law, comparative legal analysis, environmental justice, legal reform, rights of nature.*

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## 1. Introduction

Over the past several decades, the planet has witnessed an alarming acceleration of environmental degradation, much of which has been driven by large-scale human activities such as deforestation, fossil fuel extraction, industrial pollution,

and military aggression. These actions have led to not only the destruction of ecosystems but also irreversible damage to biodiversity and global climate systems. Despite mounting evidence of the catastrophic consequences of such ecological destruction, international legal frameworks have yet to establish a



consistent and enforceable mechanism to hold perpetrators criminally accountable. Current environmental law often emphasizes civil liability, regulatory fines, or soft-law mechanisms, which lack the punitive force necessary to deter the most severe offenses against nature. This legal vacuum becomes most evident when examining instances of environmental harm committed by powerful corporate entities or state actors, which often escape meaningful legal repercussions. As these destructive actions intensify in scope and frequency, the inadequacy of existing legal remedies has provoked growing global calls for the recognition of ecocide as an international crime.

The term "ecocide" first emerged in the 1970s in response to the massive ecological damage caused by the use of chemical defoliants during the Vietnam War. It was coined to describe acts of extensive environmental harm that mirror the gravity of crimes like genocide or crimes against humanity. Over time, the concept of ecocide evolved from a descriptive term into a legal proposal aimed at filling the accountability gap in environmental protection regimes. In its most recent legal articulation, ecocide refers to "unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment." This definition, developed by the Stop Ecocide Foundation and supported by legal experts across multiple jurisdictions, attempts to balance moral outrage with legal precision by linking ecological harm to established thresholds of criminal responsibility. As such, ecocide represents a legal innovation that aligns environmental protection with core principles of international criminal justice.

The urgency of prosecuting ecocide lies not only in preventing future environmental disasters but also in establishing justice for communities and ecosystems already harmed by industrial exploitation, war, or climate change. In regions like Ukraine, where military conflict has inflicted vast ecological damage, legal scholars have pointed to the pressing need for ecocide to be addressed within both national and international criminal law frameworks (Joubert, 2023). Moreover, the continued degradation of marine ecosystems by unsustainable practices has led to proposals advocating for ecocide to be used as a mechanism to hold actors accountable for crimes against the oceanic environment (Goettsche-Wanli & Müller, 2024). As environmental

destruction increasingly intersects with human rights, public health, and global security, the moral and legal impetus for prosecuting ecocide has gained considerable traction among scholars, activists, and even some policymakers (Bandopadhyay, 2024).

This article aims to review and analyze comparative legal responses to ecocide across different jurisdictions and evaluate the prospects for its codification and enforcement within international law. It seeks to explore how various countries and regions have approached the concept of ecocide, the extent to which it has been integrated into national legal systems, and the challenges that remain in advancing a universal legal standard. Furthermore, the article will consider the role of the International Criminal Court and other international legal bodies in shaping future accountability mechanisms for ecocide. By drawing on interdisciplinary insights and legal developments from 2018 to 2024, this study contributes to the broader discourse on environmental justice and the evolving landscape of international criminal law.

The methodology employed in this article is a narrative review supported by descriptive legal analysis. This approach allows for the synthesis of relevant scholarly literature, policy documents, legislative texts, and international legal proposals to construct a comprehensive overview of ecocide law. Rather than conducting empirical testing or statistical modeling, the study focuses on interpreting legal language, tracing normative arguments, and mapping jurisdictional developments related to ecocide. Emphasis is placed on comparative analysis to highlight the diversity of legal interpretations and the shared challenges that countries face in operationalizing the concept of ecocide. By combining theoretical analysis with practical legal case studies, this article offers both a conceptual and applied understanding of ecocide within the contemporary legal context.

## 2. Methodology

This narrative review employs a descriptive analytical method to explore how the concept and prosecution of ecocide have been addressed across different legal systems and international frameworks between 2018 and 2024. The aim is to synthesize legal developments, scholarly perspectives, policy debates, and legislative advancements to provide a comparative overview of

ecocide law within both national jurisdictions and international criminal justice frameworks. The methodology involves identifying and analyzing legal sources, academic publications, international proposals, and institutional reports that directly relate to the conceptualization, definition, and enforcement of ecocide as a distinct crime. The approach is interpretive and qualitative, seeking to understand the evolving legal reasoning and normative claims around ecocide, rather than to test hypotheses or quantify data.

The data for this review were gathered from a combination of peer-reviewed legal journals, reports by international and regional organizations, legal draft proposals, judicial decisions, and legislative documents published between 2018 and 2024. Priority was given to sources that specifically addressed the legal framing and criminalization of ecocide, whether at the national or international level. To ensure both depth and breadth, sources were selected based on their relevance to at least one of the following themes: conceptual foundations of ecocide, comparative legal recognition of ecocide, international legal frameworks for environmental crimes, and debates around prosecuting severe ecological harm. Research databases such as HeinOnline, Westlaw, Scopus, JSTOR, and Google Scholar were extensively used to locate academic articles, while official websites of international organizations (e.g., International Criminal Court, United Nations, European Union) and legal advocacy groups (e.g., Stop Ecocide Foundation) were consulted for primary legal texts, proposals, and official statements. The inclusion criteria required sources to be written in English, published between 2018 and 2024, and grounded in legal analysis or policy evaluation relevant to the crime of ecocide.

The review used a qualitative descriptive analysis method to interpret and synthesize the selected materials. Each text was read carefully to identify key legal arguments, conceptual developments, and jurisdictional differences in how ecocide is understood and operationalized. The materials were organized thematically around core aspects of the debate, including definitional clarity, legal justification, prosecutorial feasibility, institutional resistance, and normative legitimacy. Comparative analysis was then employed to highlight contrasts and convergences among national and regional legal systems, with a focus on identifying emerging legal norms, model legislation, and the

influence of civil society and indigenous legal traditions. Special attention was paid to the evolving role of international criminal law, including ongoing efforts to include ecocide as a fifth core crime under the Rome Statute of the International Criminal Court. Through this approach, the review captures the current legal landscape of ecocide and assesses the practical and philosophical implications of prosecuting ecological destruction across different legal contexts.

### 3. The Concept of Ecocide: Legal and Philosophical Foundations

The roots of the concept of ecocide can be traced back to the bio-centric ethical frameworks that emerged during the environmental movements of the 20th century. These frameworks sought to shift moral concern beyond human interests to include the intrinsic value of nature itself. The Vietnam War served as a catalyst for this transformation, particularly due to the use of Agent Orange and other chemical defoliants that devastated vast ecosystems. Legal theorists and activists at the time began calling for the recognition of ecocide as a crime akin to genocide, highlighting the parallels between the deliberate destruction of people and the deliberate destruction of nature. Though early efforts did not culminate in the formal inclusion of ecocide in international legal instruments, they laid the groundwork for future advocacy. In recent years, the push to add ecocide as the fifth core crime under the Rome Statute of the International Criminal Court has brought renewed attention to the historical and philosophical underpinnings of this concept (Tulibayev, 2023).

The most widely cited definition of ecocide today comes from the Independent Expert Panel for the Legal Definition of Ecocide, which was convened by the Stop Ecocide Foundation. This definition, proposed in 2021, characterizes ecocide as "unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment." This articulation draws upon established legal concepts such as intent, knowledge, and proportionality to anchor ecocide within the broader architecture of international criminal law (Robinson, 2022). By incorporating terms like "wanton" and "substantial likelihood," the definition reflects the principle of *mens rea* while also accommodating the

unique challenges of proving intent in environmental crimes (Nowak, 2022). Legal scholars have emphasized that the use of such language not only makes the definition legally actionable but also signals a moral condemnation of environmental destruction (Brynzanska, 2023b).

Integrating ecocide into the framework of international criminal law raises complex questions about state versus individual responsibility. Traditional international crimes, such as genocide or war crimes, primarily target individual perpetrators—typically state leaders or military commanders. In the case of ecocide, however, the actors responsible are often transnational corporations or state agencies engaged in extractive industries or military operations. This complicates the attribution of liability and challenges the existing jurisprudence of international criminal tribunals (Stock, 2023). Scholars have proposed various models for addressing this issue, including expanding corporate criminal liability and creating new enforcement mechanisms within international institutions (Arifin et al., 2024). Some jurisdictions have already begun to experiment with such approaches, such as Ukraine, where the criminal code includes provisions for ecocide that acknowledge the role of state and non-state actors in environmental harm (Kozak, 2024).

A key point of philosophical and legal tension in the ecocide debate is the dichotomy between anthropocentric and ecocentric legal paradigms. Anthropocentric frameworks center legal rights and responsibilities around human well-being, treating environmental harm primarily as a threat to public health or economic stability. In contrast, ecocentric frameworks assert that nature possesses inherent value independent of human use and thus deserves legal protection on its own terms. The push for ecocide legislation often draws on ecocentric values, advocating for a reconceptualization of legal personhood and accountability that includes ecosystems, rivers, forests, and other non-human entities (Minkova, 2024). This shift is evident in the legal philosophies of several Latin American countries and indigenous legal traditions that recognize the rights of nature and embed these principles in constitutional or customary law (Bandopadhyay, 2024).

However, transitioning from anthropocentric to ecocentric legal systems poses significant doctrinal and

institutional challenges. Courts must grapple with questions such as who has standing to represent the interests of nature and how to measure “long-term” or “widespread” damage in legally precise terms. The interpretation of harm in the context of ecocide must also account for the complexities of scientific uncertainty and delayed environmental impact, which complicate evidentiary standards and burden of proof requirements (Haltsova et al., 2024). Despite these challenges, recent scholarship has suggested that international law is increasingly receptive to ecocentric perspectives, particularly as environmental crises escalate and traditional legal tools prove inadequate (Adigun, 2024). Ultimately, the legal and philosophical foundations of ecocide reflect a broader paradigm shift in how law conceptualizes harm, responsibility, and justice. As environmental destruction continues to intensify, the legal recognition of ecocide is not merely a symbolic gesture but a necessary evolution in the global pursuit of sustainability and accountability. By grounding ecocide in both historical precedent and emerging legal thought, advocates seek to establish a durable legal framework capable of addressing the gravest ecological harms and preventing future environmental catastrophes.

#### 4. Comparative Legal Perspectives on Ecocide

The global legal landscape regarding ecocide remains fragmented, with jurisdictions adopting divergent approaches depending on political will, cultural values, and legal traditions. In Europe, Latin America, Africa, Asia-Pacific, and Anglo-American systems, the recognition of ecocide varies significantly, reflecting a tension between national sovereignty, environmental justice, and global accountability. Analyzing these diverse frameworks offers critical insight into the progress and obstacles facing ecocide’s legal codification. In Europe, momentum around ecocide has been building steadily, particularly in light of environmental crises and the continent’s evolving climate policies. France has taken a notable step by introducing ecocide into its national legal discourse. In 2021, following public demand for stronger environmental protections, the French government adopted a law recognizing “ecocide” as an aggravated offense, though its scope was significantly narrowed during parliamentary debate. The final version criminalizes the most serious violations of environmental law, punishable by fines and

imprisonment, but stops short of aligning with international calls to recognize ecocide as a crime under international law (Brynzanska, 2024). Legal scholars have criticized this approach for lacking the ambition to hold state or corporate actors accountable for transboundary environmental harm (Wasiuta, 2023). Belgium and the Netherlands, on the other hand, have demonstrated stronger support for the internationalization of ecocide law. Both countries have backed efforts to amend the Rome Statute of the International Criminal Court to include ecocide as a fifth core crime. This support is rooted in a broader European movement toward recognizing environmental protection as a matter of international criminal justice (Stock, 2023). The Netherlands, in particular, has been at the forefront of climate litigation, with courts ruling in favor of citizens' rights to a safe and sustainable environment, thereby reinforcing the legal and moral basis for prosecuting major ecological harm (Goettsche-Wanli & Müller, 2024). These developments suggest a regional openness to codifying ecocide that may influence broader legislative trends within the European Union.

At the supranational level, the European Union has also signaled its readiness to enhance environmental criminal law. The European Commission proposed a revision of the Environmental Crime Directive in 2021, expanding the list of environmental offenses and suggesting tougher penalties. While the proposal stops short of using the term "ecocide," it reflects a shift toward recognizing severe environmental destruction as a serious criminal matter (Kovalenko et al., 2024). The debate within the European Parliament continues to evolve, and legal experts believe the updated directive may provide a platform for harmonizing national laws on ecocide across EU member states (Minkova, 2024).

In Latin America, the recognition of nature's rights and the discourse around ecocide are deeply influenced by indigenous cosmologies and environmental justice movements. Bolivia has been a pioneer in legally recognizing the intrinsic rights of nature. Its Law of the Rights of Mother Earth, enacted in 2010, redefines the environment as a living entity with legal personhood, reflecting Andean indigenous values that emphasize harmony between humans and nature (Bandopadhyay, 2024). Although the law does not explicitly criminalize ecocide, it provides a normative foundation for future

criminal provisions that center nature as a rights-holder rather than merely an object of regulation.

Similarly, Ecuador has embedded the rights of nature into its constitution, becoming the first country in the world to do so. Article 71 of the Ecuadorian Constitution recognizes that nature has the right to exist, persist, and regenerate. This legal innovation has allowed communities to bring lawsuits on behalf of rivers, forests, and ecosystems, a move that has been celebrated by environmental advocates worldwide (Brynzanska, 2023a). While the constitutional framework does not currently classify ecocide as a crime, it facilitates legal actions that challenge large-scale environmental harm and opens the door to further legal developments rooted in ecocentric worldviews.

The interplay between indigenous legal traditions and ecocide discourse is significant in Latin America. Indigenous communities often perceive environmental harm not only as a legal violation but also as a spiritual and cultural offense. This broader understanding of ecological destruction challenges dominant legal frameworks and demands the integration of customary law into national legal systems (Aida et al., 2023). In doing so, Latin American states have the potential to lead the global transition toward legal systems that protect the rights of nature and criminalize ecocide in culturally grounded ways.

In the Asia-Pacific region and parts of Africa, the legal discourse on ecocide intersects with challenges related to climate justice, extractivism, and development. Pacific Island nations have been among the most vocal advocates for international ecocide law, driven by their acute vulnerability to rising sea levels and ecological collapse. These nations argue that large-scale environmental destruction committed by industrialized states constitutes a form of climate injustice and must be addressed through criminal accountability (Arifin et al., 2024). However, limited legal capacity and dependence on international aid constrain their ability to implement ecocide laws domestically.

In extractivist economies across both Asia and Africa, prosecuting environmental harm faces structural barriers. Industrial activities such as mining, deforestation, and fossil fuel extraction often form the backbone of national economies, leading to resistance against stringent environmental regulations. In many cases, environmental degradation occurs with state



complicity or corporate impunity, making criminal accountability for ecocide exceedingly difficult (Medvedieva & Bilotskiy, 2023). Nonetheless, public interest litigation and civil society advocacy continue to play a crucial role in exposing environmental crimes and pushing for legislative reform.

Several African constitutions now recognize the right to a healthy environment, including those of Kenya and South Africa. These constitutional provisions, while primarily enabling civil and administrative remedies, provide a legal basis for the potential criminalization of severe environmental harm. The African Charter on Human and Peoples' Rights also includes the right to a general satisfactory environment, suggesting a regional commitment to environmental justice that could support the development of ecocide law (Haltsova et al., 2024). The challenge, however, lies in translating these normative commitments into enforceable criminal statutes capable of addressing systemic environmental abuse.

In common law jurisdictions such as the United Kingdom and Canada, the conversation around ecocide has gained traction in recent years, particularly among environmental activists and legal scholars. In the UK, members of Parliament have debated the inclusion of ecocide as a criminal offense, and several legal organizations have endorsed international proposals to define and prosecute the crime (Tulibayev, 2024). Canada has also witnessed growing civil society support for ecocide legislation, with indigenous groups and environmental organizations calling for stronger protections against ecological destruction (Killeen & Newton, 2024).

The United States, however, presents a contrasting picture. Despite being one of the world's largest polluters and a key actor in global environmental governance, the U.S. has shown little political will to recognize ecocide. The legal system prioritizes regulatory enforcement through agencies like the Environmental Protection Agency (EPA) and allows for civil remedies under tort law, but it lacks a framework for prosecuting large-scale ecological harm as a criminal offense (Robinson, 2022). Efforts to expand corporate accountability for environmental harm often face political opposition and legal obstacles, such as limited standing or procedural barriers.

Nevertheless, civil society in the United States plays a pivotal role in advancing environmental justice. Strategic litigation, climate protests, and shareholder activism have increasingly been used to challenge corporate polluters and raise awareness about ecocide. While the legal avenues remain constrained, the growing mobilization of public opinion may eventually push lawmakers to reconsider the need for criminal accountability in environmental cases (Babakhani, 2023). In this regard, the U.S. illustrates the tension between legal inertia and societal demands for environmental protection.

Across these diverse jurisdictions, the concept of ecocide is gaining legal and political currency, though its implementation remains uneven. Regional differences reflect broader debates about the relationship between law, environment, and justice, suggesting that any universal framework for ecocide prosecution must be both legally robust and culturally adaptable. By examining these comparative perspectives, one gains a clearer understanding of the challenges and opportunities that lie ahead in the quest to criminalize ecocide and protect the planet from irreparable harm.

## 5. The Role of International Law in Ecocide Prosecution

International law has increasingly been called upon to address the global dimensions of environmental destruction, particularly in cases where national jurisdictions are either unwilling or unable to prosecute serious ecological crimes. Central to this debate is the effort to amend the Rome Statute of the International Criminal Court (ICC) to include ecocide as a fifth core international crime, alongside genocide, war crimes, crimes against humanity, and the crime of aggression. This proposal, championed by legal scholars, environmental activists, and several national governments, seeks to close the accountability gap for high-level environmental harm that transcends borders and affects entire ecosystems (Tulibayev, 2023).

The proposed amendment to the Rome Statute would define ecocide as acts committed with knowledge of substantial likelihood of severe and widespread or long-term damage to the environment. Legal experts argue that this definition aligns with existing ICC jurisprudence, particularly in its emphasis on *mens rea*, proportionality, and gravity (Robinson, 2022). However,

including ecocide within the jurisdiction of the ICC presents several legal and procedural challenges. Amending the Rome Statute requires a two-thirds majority of member states and is subject to intense political negotiation. Moreover, even if adopted, the court's jurisdiction would be limited to crimes committed by nationals of, or within the territory of, states that have ratified the amendment, thereby excluding major polluters such as the United States, China, and Russia unless they opt in (Prihandono & Yuniarti, 2022).

Jurisdictional and procedural complexities further complicate the enforcement of ecocide law at the international level. The principle of complementarity, which underlies the ICC's operations, mandates that international prosecution is only permissible when national legal systems fail to act. This raises questions about the capacity and willingness of domestic courts to investigate and prosecute ecocide. Additionally, the notion of universal jurisdiction, though appealing in theory, remains contentious in practice, particularly when applied to environmental crimes that involve corporate or state actors with significant geopolitical influence (Borschevska, 2023).

Comparing ecocide to existing international crimes highlights both the potential and the limitations of prosecutorial frameworks. Like genocide and crimes against humanity, ecocide targets acts of extreme harm, yet it departs from these crimes in its focus on non-human victims and environmental damage as the central harm. This shift challenges traditional doctrines that prioritize human-centered violations and introduces novel questions about evidentiary standards, temporal scales, and victim representation (Nowak, 2022). Some scholars argue that recognizing ecocide would not only expand the moral and legal compass of international criminal law but also catalyze reforms in related fields such as environmental law, human rights, and climate governance (Adigun, 2024).

Despite the conceptual appeal of international ecocide prosecution, institutional and political barriers remain formidable. The divide between the Global North and South continues to influence debates over responsibility, enforcement, and legal sovereignty. Developing countries often express concern that ecocide law could be weaponized to restrict their development or penalize activities driven by historical exploitation. Conversely,

industrialized nations are wary of exposing their corporations and military operations to international scrutiny. These tensions reveal the deep-seated geopolitical challenges that hinder consensus on global environmental accountability (Бепеша et al., 2023). Nonetheless, the ongoing campaign to recognize ecocide within international law reflects a growing consensus that environmental destruction must be addressed as a matter of global justice. While the ICC may not yet possess the authority or political backing to prosecute ecocide effectively, its symbolic and normative influence continues to shape national debates and legal reform. As legal scholars and civil society actors push for reform, the role of international law in ecocide prosecution remains central to envisioning a future where nature is no longer treated as collateral damage in the pursuit of power and profit.

## 6. Debates and Challenges in Operationalizing Ecocide Law

Operationalizing ecocide law presents a complex matrix of legal, institutional, and philosophical challenges that continue to divide scholars, policymakers, and environmental advocates. One of the foremost concerns is the issue of legal certainty. Critics argue that the current definitions of ecocide, including the widely referenced proposal by the Stop Ecocide Foundation, remain overly broad and risk violating the principle of *nullum crimen sine lege*, or no crime without law. The use of terms such as "wanton" or "substantial likelihood of severe and widespread or long-term damage" introduces ambiguity, making it difficult for legal practitioners to determine what qualifies as ecocide under judicial scrutiny (Robinson, 2022). Legal clarity is essential not only for securing convictions but also for providing fair notice to potential offenders, especially in the context of transboundary and delayed environmental harms (Nowak, 2022).

Concerns over overbreadth also stem from the expansive nature of human activity that affects the environment. If ecocide is defined too broadly, it risks criminalizing routine economic activities such as agriculture, infrastructure development, or industrial operations, particularly in resource-dependent countries. Such an approach may provoke resistance from states that fear economic constraints, especially in the Global South, where development goals remain closely tied to

environmental exploitation. Scholars have warned that without precise thresholds and clear intent requirements, ecocide law could be rendered either politically unpalatable or judicially unworkable (Wasiuta, 2023).

Another contentious issue is the attribution of responsibility—specifically, the distinction between corporate liability and state responsibility. In many ecocide scenarios, the actors behind environmental harm are multinational corporations whose operations are protected, regulated, or even encouraged by state entities. This complicates the question of who should be held criminally liable. The traditional model of international criminal law, which focuses on individual culpability, may not be sufficient in capturing the systemic and institutional nature of ecological destruction (Tulibayev, 2024). Some legal systems, such as Ukraine's, have begun to explore hybrid models that allow for both corporate and individual prosecution under ecocide statutes (Kozak, 2024). However, the integration of corporate liability into international criminal law remains a contentious issue, and international legal instruments currently lack the necessary provisions to consistently hold corporate entities accountable for environmental crimes (Kovalenko et al., 2024).

Balancing environmental protection with economic development is another challenge that complicates the operationalization of ecocide law. Many countries, particularly those with emerging economies, argue that environmental regulations must not obstruct their sovereign right to industrial growth and resource utilization. The history of environmental governance is marked by asymmetries in responsibility and capability, where industrialized nations have contributed disproportionately to ecological degradation while developing nations bear the brunt of its consequences (Arifin et al., 2024). In this context, enforcing ecocide law without addressing global inequalities may be perceived as neo-colonial or unjust, undermining its legitimacy and acceptance (Береза et al., 2023). Effective implementation must therefore be accompanied by international support mechanisms, including technology transfer, capacity building, and financial assistance, to ensure that environmental justice does not come at the expense of economic justice.

The enforceability of ecocide law also depends on the availability and admissibility of scientific evidence. Proving the elements of ecocide—such as the scale, severity, and intentionality of environmental harm—requires sophisticated environmental forensics and access to reliable data. Unlike traditional international crimes that often involve direct human victims and readily available testimonies, ecocide cases may hinge on ecological indicators, longitudinal studies, and complex causal chains (Goettsche-Wanli & Müller, 2024). This evidentiary burden can be particularly difficult to meet in jurisdictions lacking scientific infrastructure or facing political interference in data collection. Legal scholars have emphasized the need to develop specialized evidentiary standards and protocols for ecocide prosecution to ensure consistency and fairness in judicial proceedings (Haltsova et al., 2024).

Another critical debate centers on the risk of symbolic lawmaking. There is concern that codifying ecocide without ensuring effective enforcement mechanisms may result in legal instruments that serve more as political gestures than as real deterrents. Symbolic criminalization may appease public outcry or generate international prestige without meaningfully altering behavior or preventing environmental harm. This is particularly true when legal provisions are not accompanied by institutional investment, prosecutorial resources, or judicial independence (Babakhani, 2023). To avoid this pitfall, experts argue that the criminalization of ecocide must be embedded in broader legal reforms and enforcement strategies that include education, monitoring, and civil society participation (Brynzanska, 2023b).

Overall, while the moral urgency of prosecuting ecocide is widely acknowledged, its translation into operational legal frameworks remains fraught with complexity. To overcome these challenges, ecocide law must be carefully designed to balance legal precision with moral clarity, individual responsibility with systemic accountability, and environmental protection with social equity. Without these considerations, the criminalization of ecocide risks remaining a theoretical aspiration rather than a practical tool for environmental justice.

## 7. Future Directions and Policy Recommendations



As legal systems worldwide grapple with the challenge of prosecuting ecological destruction, a coherent and forward-looking approach is required to transform ecocide from a conceptual innovation into an enforceable legal reality. One of the most promising strategies involves legal harmonization across jurisdictions. Developing model legislation for ecocide that can be adapted to national contexts offers a practical path forward. Such models should integrate core legal elements—such as intentionality, severity of harm, and accountability structures—while remaining flexible enough to accommodate diverse legal traditions. Ukraine has made notable progress in this regard by codifying ecocide in its criminal code and distinguishing it from environmental harm committed during armed conflict (Brynzanska, 2023a). By studying and adapting such precedents, other states can accelerate the process of legal harmonization.

At the international level, multilateral cooperation will be essential to give ecocide law legitimacy and enforceability. Regional treaties and conventions may serve as effective starting points, particularly in the absence of consensus at the global level. For instance, environmental blocs like the European Union or regional courts in Latin America could introduce binding instruments that recognize ecocide and facilitate cross-border cooperation in prosecution (Minkova, 2024). Moreover, mechanisms for information sharing, joint investigations, and judicial training could be embedded into these agreements to strengthen institutional capacity (Killeen & Newton, 2024).

In addition to state-centered approaches, integrating ecocide into corporate governance frameworks is vital. Environmental, Social, and Governance (ESG) standards are becoming increasingly influential in shaping business behavior, and the inclusion of ecocide risks in due diligence processes can promote corporate accountability. Legal scholars suggest that ESG frameworks should mandate environmental impact assessments that consider the potential for ecocidal harm, particularly in sectors such as mining, oil, and agriculture (Prihandono & Yuniarti, 2022). Investors and regulatory agencies can also play a role by conditioning market access or public contracts on compliance with anti-ecocide standards (Adigun, 2024). In this way, the deterrent effect of ecocide law can be enhanced through

non-criminal mechanisms that influence corporate conduct upstream.

Finally, the success of ecocide law depends not only on legal instruments but also on public consciousness. Building political will requires a sustained effort to educate the public, mobilize civil society, and influence decision-makers. Public interest campaigns, academic engagement, and media advocacy have already contributed to raising awareness of ecocide and shifting the legal discourse (Aida et al., 2023). Legal institutions, in turn, must respond to these societal demands by institutionalizing channels for citizen participation in environmental governance, such as environmental ombudspersons or public prosecutors with ecological mandates (Tulibayev, 2024).

In sum, the future of ecocide law lies in a multipronged strategy that combines legal innovation, institutional cooperation, corporate responsibility, and civic engagement. By aligning these elements, the international community can move closer to a legal framework that not only punishes environmental destruction but also prevents it—transforming ecocide from a theoretical concept into a powerful instrument of environmental justice.

## 8. Conclusion

The recognition and prosecution of ecocide represent a significant turning point in the evolution of environmental law and international criminal justice. As the planet continues to face unprecedented ecological challenges—from deforestation and biodiversity loss to climate change and pollution—the urgency to establish a robust legal framework capable of deterring and punishing environmental destruction has never been more evident. Ecocide, as a concept, offers a powerful legal and moral tool to elevate the protection of the natural world to the level of serious international concern, positioning it alongside crimes such as genocide, war crimes, and crimes against humanity.

Throughout this article, the complexity and necessity of prosecuting ecocide have been examined from multiple legal and comparative perspectives. The analysis reveals that while there is growing global support for the idea of ecocide as an international crime, significant challenges remain in translating this support into consistent and enforceable legal norms. Various jurisdictions have taken important steps toward criminalizing severe

environmental harm. In Europe, legislative proposals, regional reforms, and judicial activism signal a deepening commitment to environmental protection. Latin American and indigenous legal traditions contribute a transformative vision of nature as a rights-bearing entity, which reshapes the foundations of legal accountability. Meanwhile, in the Asia-Pacific and African contexts, the ecocide discourse intersects with broader struggles for environmental justice, sovereignty, and sustainable development. In common law systems, particularly in Anglo-American contexts, civil society and litigation strategies are at the forefront of advancing the conversation, even where formal legal recognition remains absent.

Internationally, efforts to include ecocide in the Rome Statute of the International Criminal Court reflect the broader aspiration to hold powerful actors accountable for global ecological destruction. While the procedural and political hurdles are formidable, these efforts underscore the rising importance of environmental harm in international law. The proposed legal definition of ecocide, though still under debate, has created a platform for cross-disciplinary dialogue and legal reform. As the international community considers new paradigms for addressing ecological crises, ecocide offers a compelling framework grounded in justice, accountability, and ecological integrity.

Nevertheless, operationalizing ecocide law requires navigating a complex set of legal, philosophical, and institutional challenges. Concerns about legal certainty, evidentiary burdens, and the risk of symbolic lawmaking must be carefully addressed to ensure that ecocide laws are not only ethically resonant but also practically enforceable. The dilemma of attributing responsibility, particularly in cases involving corporations or state-sanctioned actions, demands innovative legal solutions that go beyond traditional models of individual criminal liability. Furthermore, any approach to ecocide must balance environmental protection with social and economic realities, especially in regions where development remains a pressing concern.

What emerges from this global review is the need for a multipronged strategy to make ecocide law meaningful and effective. Legal harmonization, both within and between countries, will be essential to avoid fragmentation and ensure consistency in prosecution. Model legislation and regional treaties can serve as

important building blocks toward a more unified global standard. At the same time, international cooperation must be paired with domestic legal reforms and institutional capacity-building. Countries must invest in scientific infrastructure, judicial training, and regulatory mechanisms to support the enforcement of ecocide statutes.

Equally important is the integration of ecocide considerations into the private sector. By embedding environmental accountability into corporate governance and risk assessment frameworks, particularly through ESG standards and due diligence obligations, the legal concept of ecocide can influence business conduct and decision-making processes. This proactive approach complements criminal liability and extends the reach of ecocide law into the broader economic sphere, where many of the most significant environmental harms originate.

Finally, the success of ecocide law ultimately depends on political will and public support. Legal change rarely occurs in isolation from societal values. The growing awareness of environmental crises, driven by scientific evidence and visible ecological impacts, has created fertile ground for normative shifts in public consciousness. Activists, academics, legal professionals, and citizens all have a role to play in sustaining momentum for legal reform and holding governments accountable for environmental stewardship. Public engagement, education, and advocacy are vital to ensure that ecocide does not remain a symbolic gesture but becomes a cornerstone of global environmental governance.

In conclusion, prosecuting ecocide is more than a legal innovation—it is a necessary response to the scale and severity of contemporary ecological destruction. It reflects a broader ethical commitment to recognizing the rights of nature, the interdependence of human and ecological systems, and the imperative to safeguard the planet for future generations. While the path toward codifying and operationalizing ecocide law is complex and challenging, it offers a vision of justice that aligns with the realities of the Anthropocene. By embracing this vision and working collectively across legal systems, cultures, and institutions, the international community can take a decisive step toward confronting environmental harm not only as a policy failure but as a crime against the very foundations of life on Earth.

## Authors' Contributions

Authors contributed equally to this article.

## Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

## Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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## Declaration of Interest

The authors report no conflict of interest.

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## Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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