

Ecocide as an International Crime: Towards a New Paradigm of Environmental Protection in International Criminal Law

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Abstract—Climate change, biodiversity collapse, deforestation, ocean acidification, and large-scale industrial pollution have brought global ecosystems to a critical tipping point. Yet the international legal system remains structurally ill-equipped to address severe environmental destruction that transcends borders and causes irreversible harm. Existing frameworks under international environmental law rely primarily on state consent, soft law, and non-punitive mechanisms, leaving significant accountability gaps. In response, the movement to recognise ecocide as an international crime—on par with genocide, war crimes, crimes against humanity, and the crime of aggression—seeks to shift environmental protection from voluntary compliance to enforceable criminal responsibility.

This article examines the conceptual, doctrinal, and political foundations of criminalising ecocide at the international level. It traces the evolution of the ecocide debate, analyses the proposed legal definitions, evaluates the feasibility of amending the Rome Statute of the International Criminal Court (ICC), critiques the current regulatory vacuum, and explores the transformative potential of ecocide as a normative tool. Through comparative analysis, case studies, and an assessment of emerging international practice, this article argues that criminalising ecocide is essential for ensuring environmental justice, intergenerational equity, and global ecological security.

Index Terms—Ecocide; International Criminal Law; Rome Statute; International Criminal Court; Environmental Crime; Environmental Justice; Climate Justice; Genocide and Crimes Against Humanity; Transboundary Harm; Environmental Protection; Anthropocene; Corporate Liability; State Responsibility; Environmental Governance; Intergenerational Equity; Rights of Nature; Sustainable Development; Customary International Law; Environmental Damage; Global Environmental Law;

Ecocentrism; Environmental Accountability; International Law Reform.

I. INTRODUCTION

Humanity is confronting an era of profound ecological crisis. Scientific assessments from the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), and the United Nations Environment Programme (UNEP) consistently warn that the planet is approaching irreversible tipping points. Anthropogenic activities—ranging from industrial emissions and deforestation to deep-sea mining and large-scale resource extraction—are generating environmental consequences that are not only widespread and severe but often permanent. Iconic examples underscore the gravity of the threat: the Amazon rainforest, once a stabilizing global carbon sink, now shows signs of transitioning toward a net carbon source; massive oil spills in the Niger Delta and the Gulf of Mexico have devastated marine ecosystems and local economies; plastic pollution has infiltrated even the deepest ocean trenches; and extractive industries continue to dispossess indigenous communities while collapsing biodiversity hotbeds.

Despite the enormity of this destruction, existing legal frameworks remain inadequate. International environmental law relies heavily on non-binding obligations, state consent, and soft-law principles such as the precautionary principle and sustainable development. Civil liability mechanisms, moreover, are often too weak, slow, or fragmented to hold powerful actors—whether states, multinational corporations, or non-state entities—accountable for ecologically catastrophic harm. This regulatory

vacuum has intensified calls for the recognition of ecocide as a distinct, prosecutable international crime, comparable to genocide, crimes against humanity, war crimes, and the crime of aggression.

The central normative question is whether international criminal law (ICL)—historically anthropocentric and focused on the protection of human interests—can evolve to acknowledge the intrinsic value of nature and recognise ecosystems as entities deserving of legal protection in their own right. Elevating ecocide to the status of a core international crime would signal a transformative shift towards an ecocentric legal order in which severe environmental destruction is treated not merely as a regulatory violation but as a grievous offence against planetary stability, human rights, and future generations.

II. HISTORICAL DEVELOPMENT OF THE CONCEPT OF ECOCIDE

2.1 Early Origins

The conceptual roots of ecocide can be traced back to the 1960s and 1970s, particularly during the Vietnam War when the United States deployed chemical agents such as Agent Orange, causing unprecedented destruction of forests, soils, biodiversity, and human health. Influential scientists and jurists—including Arthur Galston, who first used the term “ecocide,” and Richard Falk, who advocated for criminal sanctions—began arguing that intentional environmental devastation should be prohibited under international law. Their scholarship broadened the discourse by connecting environmental destruction with global peace, security, and human survival.

Simultaneously, the rapid industrialisation of the post-war era produced new forms of ecological harm, leading to a growing consciousness that massive environmental damage could threaten not just national territories but the global commons.

2.2 The Stockholm Conference and Draft Codes

The 1972 United Nations Conference on the Human Environment (Stockholm Conference) marked a significant moment in global environmental governance. The term “ecocide” appeared in official discussions, with several states—particularly from the Global South—advocating for its recognition as an international crime. This period also witnessed increasing calls for the United Nations to develop mechanisms to criminalise environmental harm.

Responding to these pressures, the International Law Commission (ILC) considered environmental destruction within its Draft Code of Crimes Against the Peace and Security of Mankind (1980s–1990s). Early drafts included provisions penalising “severe damage to the environment,” demonstrating a willingness to integrate ecological harm into the emerging framework of international criminal law. However, geopolitical divisions, particularly between industrialised nations and developing states, led to the removal of these provisions. Powerful states argued that such obligations would constrain economic and military activities, ultimately blocking ecocide from entering the final draft of the Rome Statute in 1998.

2.3 Modern Revival

The contemporary revival of ecocide stems from accelerating climate change, biodiversity collapse, and heightened public awareness of global ecological threats. From 2010 onwards, civil society movements, most notably Stop Ecocide International, mobilised legal scholars, states, and activists to push for international criminalisation. Their efforts culminated in the establishment of the Independent Expert Panel for the Legal Definition of Ecocide (2021), which produced a proposed definition tailored for inclusion in the Rome Statute. The rising frequency of megafires, mass pollution events, and extreme weather disasters has further galvanised political will, prompting small island states like Vanuatu and Samoa to champion ecocide at the ICC Assembly of States Parties.

Today, ecocide is no longer a fringe concept but a subject of serious diplomatic negotiation, regional legislative reform, and global academic debate.

III. DEFINING ECOCIDE: KEY LEGAL ELEMENTS

The 2021 Independent Expert Panel’s definition represents the most carefully crafted and internationally discussed formulation to date:

“Ecocide” means 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 being caused by those acts.”

This definition balances scientific precision, legal clarity, and political feasibility.

3.1 Actus Reus

The actus reus comprises specific forms of conduct and resulting harm:

- Unlawful or wanton acts: “Unlawful” refers to activities already prohibited under domestic or international law. “Wanton” expands liability to acts that may be lawful but are carried out with reckless disregard for environmental consequences.
- Severe, widespread, or long-term environmental damage:

The definition draws directly from environmental protection norms in Additional Protocol I to the Geneva Conventions, ensuring doctrinal consistency.

- *Severe*: Significant disruption or harm to ecosystems, species, or ecological functions.
- *Widespread*: Damage extending beyond a limited area, affecting entire ecosystems or multiple states.
- *Long-term*: Damage that is irreversible or irreparable within a reasonable timescale.
- Harm to ecosystems, not only humans:

This marks a major departure from anthropocentric criminal law by recognising nature as an entity capable of being harmed.

3.2 Mens Rea

The mental element requires:

- Knowledge of a substantial likelihood of environmental harm:

This standard is more flexible than intent but stronger than negligence, recognising the scientific uncertainties inherent in environmental prediction. It demands awareness of risks rather than purposeful destruction, making it suitable for modern environmental crimes often linked to industrial or corporate conduct.

- Balancing foreseeability with scientific complexity: Courts must evaluate evidence from environmental science, climate modelling, and ecological assessments to determine the actor’s knowledge and risk awareness.

3.3 Threshold of Harm

The threshold mirrors existing international humanitarian law standards, promoting legal certainty and cross-disciplinary coherence. It ensures that only the most serious environmental harms—those capable of threatening ecological integrity, human life, or planetary stability—are criminalised as ecocide.

Lesser offences remain within domestic regulatory frameworks.

IV. ECOCIDE AND THE EVOLUTION OF INTERNATIONAL CRIMINAL LAW

International criminal law (ICL) has historically centred on the protection of human beings—prosecuting genocide, war crimes, crimes against humanity, and aggression. These categories reflect the post-Second World War moral project of ensuring accountability for mass atrocities. However, the accelerating ecological crisis challenges the anthropocentric foundations of ICL. The environment is no longer merely a backdrop against which human suffering occurs; it is itself a direct victim of deliberate or reckless human conduct.

4.1 Anthropocentric Roots of ICL

The Rome Statute, adopted in 1998, embodies a framework where environmental harm is punishable only in the narrow context of armed conflict under Article 8(2)(b)(iv). This provision prohibits intentional environmental destruction if it is “widespread, long-term and severe,” but only when committed during international armed conflicts. The emphasis remains on consequences for humans, not ecosystems. This reflects a historical worldview that places human survival at the centre of normative protection.

4.2 Expanding the Circle of Protection

Recognising ecocide as an international crime would mark a paradigm shift. It would:

- Affirm that the environment has intrinsic value worthy of legal protection.
- Shift accountability from states to individual decision-makers—corporate executives, political leaders, and military commanders.
- Introduce a preventive dimension to ICL, dissuading high-risk industrial practices.

4.3 Environmental Harm as a Crime of International Concern

Catastrophic environmental damage often transcends borders. Deforestation in the Amazon alters rainfall patterns across continents; Arctic ice loss accelerates global sea-level rise; marine pollution spreads rapidly through ocean currents. The transboundary character of ecological harm places ecocide within the category of global public wrongs, similar to piracy or genocide.

V. THE CASE FOR RECOGNISING ECOCIDE AS AN INTERNATIONAL CRIME

5.1 Closing Accountability Gaps

Current international environmental law relies heavily on state responsibility, soft-law commitments, and compliance-based mechanisms. These frameworks suffer from:

- Weak enforcement structures
- Political bargaining and compromise
- Limited remedies for affected communities
- Immunities for political and corporate leaders

Criminalising ecocide would bypass these limitations by holding powerful individuals personally liable. It would also deter reckless environmental practices and strengthen the ability of states to prosecute harmful corporate behaviour.

5.2 Moral and Ethical Imperatives

The moral case for ecocide is grounded in the idea that ecosystems and non-human species deserve protection from irreversible harm. Indigenous worldviews, in particular, conceptualise nature as a living entity with rights and spiritual significance. The legal recognition of ecocide resonates with these philosophies and responds to the ethical requirement of safeguarding future generations.

5.3 Scientific Necessity

With ecosystems nearing tipping points—such as coral bleaching, rainforest dieback, and mass species extinction—there is growing scientific consensus that preventing catastrophic harm requires strong legal deterrence. Climate scientists warn that environmental collapse is accelerating faster than regulatory frameworks can adapt.

5.4 Human Rights Implications

Environmental degradation disproportionately affects marginalised communities, including indigenous peoples, children, women, and low-income populations. Ecocide law would therefore reinforce existing human rights protections by preventing environmental conditions that threaten life, livelihood, and dignity.

VI. ECOCIDE IN DOMESTIC AND REGIONAL LEGAL SYSTEMS

While ecocide is not yet recognised at the international level, several states and regional bodies have taken

steps toward criminalising severe environmental destruction.

6.1 Domestic Legislation

Countries such as Vietnam, Russia, Kazakhstan, Georgia, and Ukraine already recognise “ecocide” in their penal codes, though often with varied definitions and limited enforcement. These provisions typically target large-scale environmental destruction during peacetime and wartime.

Small island states like Vanuatu and the Maldives have formally proposed amending the Rome Statute to include ecocide, driven by existential climate threats.

6.2 Regional Developments

The European Union has begun revising its environmental crime directive to strengthen penalties and define severe environmental harm, signalling openness to the concept of ecocide. The African Charter on Human and Peoples’ Rights recognises the right of all peoples to a “general satisfactory environment favourable to their development,” creating space for ecocide-type claims.

6.3 Indigenous Legal Traditions

Indigenous legal systems across the world—such as Māori law in New Zealand or Andean philosophies in Bolivia and Ecuador—recognise “rights of nature” and conceive ecological harm as an offence against the community and the cosmos. These frameworks offer rich conceptual support for ecocide as a crime.

VII. CHALLENGES TO THE CRIMINALISATION OF ECOCIDE

Despite growing support, several doctrinal, institutional, and political challenges remain.

7.1 Definitional Ambiguities

How “severe,” “widespread,” or “long-term” should be interpreted can vary depending on scientific data, scale, and context. Establishing the precise threshold of harm may require interdisciplinary judicial expertise.

7.2 Mens Rea Complexity

Proving that a corporate executive or state official knew that their actions carried a substantial likelihood of environmental harm may be difficult. Many destructive activities are justified by economic development rhetoric or shrouded in layers of bureaucratic decision-making.

7.3 Sovereignty Concerns

Some states fear that ecocide law could restrict their sovereign right to exploit natural resources. Others worry about selective prosecution or geopolitical misuse of international criminal law.

7.4 Institutional Constraints of the ICC

The International Criminal Court (ICC) faces:

- Limited jurisdiction
- Dependence on state cooperation
- Slow judicial processes
- High evidentiary burdens

Expanding the Rome Statute to include ecocide would require political will from member states and substantial institutional investment.

VIII. PATHWAYS FORWARD: RECONCILING LAW, SCIENCE, AND ETHICS

8.1 Amending the Rome Statute

The most direct path is adopting the 2021 expert panel's definition. Amendments require approval by two-thirds of the Assembly of States Parties and ratification by seven-eighths.

8.2 Strengthening Domestic Criminal Laws

States can enact domestic ecocide legislation irrespective of international consensus. Such laws can:

- Guide corporate standards
- Empower local communities
- Lay the groundwork for international harmonisation

8.3 Integrating Ecocide into Climate Governance

Linking ecocide with carbon markets, climate finance obligations, and environmental impact assessments would create a comprehensive governance framework.

8.4 Enhancing Judicial Expertise

Training judges, prosecutors, and investigators in environmental science, toxicology, and climate modelling is essential for robust enforcement.

IX. CONCLUSION

The recognition of ecocide as an international crime represents a transformative step in global environmental governance. As ecological destruction accelerates, existing legal frameworks remain inadequate to address the scale and urgency of the crisis. International criminalisation would send a powerful normative signal: irresponsible exploitation

of nature is not merely a regulatory violation but a moral wrong of the highest order.

Ecocide law promises to bridge the gap between environmental protection and human rights, strengthen accountability for powerful actors, and acknowledge the intrinsic value of the natural world. By elevating ecological harm to the level of an international crime, the global community would affirm its commitment to safeguarding the planet for present and future generations.

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