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RESTORATIVE JUSTICE OR 'RESTORATIVE INJUSTICE'? EXAMINING NORMATIVE LIMITATIONS IN INDONESIA'S NEW PENAL CODE ON ENVIRONMENTAL ECONOMIC CRIMES

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Abstract

This article critically examines the application of restorative justice in Indonesian environmental criminal law under Law No. 1 of 2023 concerning the Criminal Code and Law No. 32 of 2009 on Environmental Protection and Management. It focuses on how restorative justice may be transformed into "restorative injustice" in cases involving corporate environmental crimes and structural ecological damage. Although restorative justice is normatively supported by the purposes of sentencing set out in Article 51 and reflected in Articles 52–54 of the Criminal Code, its implementation in environmental cases may depart from these objectives. In particular, restoration may be understood as procedural settlement or financial compensation rather than scientifically verifiable ecological recovery. This study employs doctrinal legal research through statutory and conceptual approaches, drawing on green criminology, ecological justice, and critical legal studies to assess the coherence of the restorative justice framework with the characteristics of environmental crime. The analysis shows that environmental crimes differ from conventional offenses because they affect collective and diffuse victims, cause irreversible ecological degradation, and generate long-term public consequences. Such harms cannot be adequately remedied through negotiated settlements alone. The findings indicate that restorative mechanisms may legitimize corporate impunity when No. compensation is prioritized over ecological restoration and corporate accountability, notwithstanding the corporate criminal liability provisions under Law No. 32 of 2009. This article therefore develops the concept of "restorative injustice" to describe a condition in which justice is formally and procedurally achieved but substantively fails to restore ecological balance, secure corporate accountability, protect environmental sustainability, or safeguard the rights and welfare of present and future generations. It argues that restorative justice in environmental criminal law must be assessed not merely by settlement procedures or compensation payments, but by measurable ecological outcomes, meaningful accountability, and the protection of affected communities and ecosystems.

Keywords: Restorative Justice; Restorative Injustice; Environmental Criminal Law; Corporate Criminal Liability; Ecological Justice.

A. Introduction

Over the past two decades, environmental crimes have undergone a profound transformation from regulatory violations into complex forms of structural and economic crime (Lynch, 2020; Shover & Routhe, 2005; Zahroh & Najicha, 2022). Activities such as large-scale deforestation, industrial pollution, extractive exploitation, and transboundary ecological destruction are no longer isolated legal infractions but manifestations of systemic economic practices that externalize ecological costs for profit. These crimes produce long-term, cumulative, and often irreversible damage, affecting not only present populations but also future generations. According to the theory

of green criminology introduced by Lynch and Stretesky (2014), environmental crimes not only violate positive law, but also violate the principle of ecological justice because the victims are collective, diffuse, and often unidentified individually.

Environmental crime, in this sense, cannot be reduced to conventional notions of illegality, as it is often embedded within legal economic activities that systematically externalize environmental harm (White, 2013, 2014). This structural dimension highlights that environmental degradation is frequently normalized through regulatory frameworks that prioritize economic productivity over ecological sustainability. As a result, the distinction between legal and illegal conduct becomes increasingly blurred in environmental governance, making enforcement highly dependent on how harm is legally constructed rather than on the actual ecological consequences produced.

The enactment of Law No. 1 of 2023 on the Criminal Code marks a shift in the orientation of criminal punishment in Indonesia towards a more humanistic and restorative approach. Articles 51–54 of the Criminal Code (Malau, 2023) introduce guidelines for criminal punishment that emphasize balance, restoration, and protection of human dignity. Normatively, these provisions are in line with global developments that encourage a criminal justice system oriented towards restorative justice, a paradigm that focuses on restoring social relations between perpetrators, victims, and society (Siahaan & Yudiantara, 2025). Restorative justice, as developed in classical criminological thought, is premised on relational harm and the possibility of repairing social relationships through participatory dialogue (Umbreit & Armour, 2010). However, its application presupposes the existence of identifiable victims and symmetrical relationships of harm, conditions that are often absent in environmental crimes. Environmental harm is instead characterized by asymmetry, where affected ecosystems, non-human entities, and future generations cannot directly participate in restorative processes. This creates a conceptual tension in translating restorative justice into environmental governance, as the normative assumptions underlying restorative justice do not fully align with the ecological nature of environmental harm.

However, the application of restorative justice in environmental crime raises critical conceptual and structural challenges. Classical restorative justice presupposes identifiable victims, interpersonal harm, and the possibility of relational repair (Ulinihayati & Saleh, 2025). Environmental harm, by contrast, is diffuse, collective, and ecological in nature. The "victim" is often an ecosystem, a future generation, or a community that cannot be adequately represented in conventional restorative processes (Porfido, 2021). The environment is not merely an object of damage, but an ecological entity that has intrinsic value and importance for sustainability. When a restorative approach is applied without differentiating the nature of the crime, there is a risk that restoration will be reduced to a mere administrative settlement or financial compensation (Ufran & Amaral, 2019).

Literature on restorative justice in Indonesia generally positions this approach as a progressive solution to a repressive penal system. Previous studies tend to emphasize the advantages of restorative justice in strengthening victim participation, reducing over-criminalization, and promoting social reconciliation (Bara et al., 2024; Kurniawan et al., 2025). However, there is a research gap in analyzing the conceptual and structural limits of restorative justice when applied to environmental crimes involving corporations and systemic ecological damage (Rahmad & Hafis, 2021). Discourse on environmental justice and critical environmental justice theory has broadened our understanding of ecological inequality and power relations but has not yet systematically examined its implications for the normative design of restorative justice in national criminal law (Pardede & Santoso, 2022). From a green criminological perspective, environmental crimes should be understood as structural outcomes of economic systems rather than isolated acts of deviance. Corporate environmental harm often arises from cost-externalization mechanisms in which environmental degradation is absorbed as an unintended but predictable consequence of profit-oriented production. This structural framing implies that environmental harm is not merely

a matter of legal compliance, but a reflection of deeper political-economic arrangements that shape how environmental risks are distributed across society and ecosystems.

The urgency of this issue becomes even more relevant when considered in light of the characteristics of environmental crime as a form of transnational crime that is high-profit and low-risk. According to the latest report by INTERPOL and the United Nations Environment Programme (UNEP), the global economic value of environmental crime is estimated to reach approximately USD 91–259 billion per year and continues to rise by about 5–7% annually, growing even faster than global economic growth (United Nations Environment Programme & INTERPOL, 2016). Environmental crime is currently viewed as one of the most profitable forms of organized crime in the world, following drug trafficking, counterfeiting, and human trafficking. These high-profit, low-risk characteristics arise due to weak regulations, low risk of criminal prosecution, and the dominance of administrative and financial settlements over substantive ecological restoration. INTERPOL even emphasizes that organized crime networks are increasingly exploiting environmental crime as a means for money laundering, corruption, exploitation of natural resources, and the strengthening of transnational criminal activities (Rebhi, 2024). This phenomenon is not limited to Indonesia; it has become a global issue. In various international cases, environmental crimes are often resolved through fines and financial compensation without adequate long-term ecological restoration. INTERPOL has even emphasized that pollution crimes increasingly involve organized crime networks that exploit weak environmental regulations and low enforcement risks to reap substantial economic gains (Hrishakov, 2023). Consequently, environmental crime can no longer be viewed as a mere administrative violation but rather as a form of structural economic crime with transnational and intergenerational impacts that threaten global ecological sustainability.

A significant pattern of corporate involvement in environmental degradation can be observed in criminal proceedings in which corporate accountability has been established, yet the imposition of criminal sanctions does not necessarily correspond to comprehensive ecological restoration. This tension is particularly evident in the case of PT Kallista Alam, one of the important precedents for corporate criminal liability in Indonesian environmental law. Through Judgment No. 131/Pid.B/2013/PN.MBO, the Meulaboh District Court found PT Kallista Alam, represented by its director, legally and convincingly guilty of committing a continuous environmental crime. The case concerned the clearing and burning of land within the Leuser Ecosystem in Aceh, where the court found that the corporation lacked adequate fire-prevention and control facilities, resulting in damage to peatland. The corporation was subsequently sentenced to a criminal fine of IDR 3 billion. The judgment is particularly significant because the corporation itself was prosecuted and punished as the offender, rather than merely attributing criminal responsibility to its individual management, thereby demonstrating the practical application of corporate criminal liability under Article 116 of Law No. 32 of 2009 on Environmental Protection and Management. Nevertheless, the case also exposes an important normative limitation in environmental criminal justice. Although the imposition of a criminal fine establishes formal accountability for corporate environmental wrongdoing, a monetary penalty does not necessarily ensure the recovery of ecological functions that have been damaged. In the context of peatland ecosystems, environmental harm may extend beyond the immediate area of burning to the disruption of hydrological functions, biodiversity, carbon storage capacity, habitat integrity, and long-term ecosystem resilience. Consequently, criminal accountability and ecological restoration should not be treated as interchangeable objectives: the former establishes culpability and imposes punishment, whereas the latter requires concrete, measurable, and sustained measures directed toward the recovery of ecological functions (Rahmah et al., 2025). The PT Kallista Alam case therefore illustrates a critical gap between the achievement of corporate criminal accountability and the realization of substantive ecological restoration, demonstrating that the success of environmental criminal prosecution cannot be measured solely by whether a corporation has been

convicted or fined, but must also be assessed by whether the resulting legal response contributes to the actual recovery of the damaged ecosystem.

This mismatch creates a fundamental tension. When restorative justice is applied without adapting to the ecological nature of harm, it risks being reduced to a procedural mechanism of dispute settlement, often centered on financial compensation. In such cases, restoration is no longer ecological but economic, and justice becomes transactional rather than transformative. This article addresses the following research questions; How do Articles 51–54 of the New Criminal Code construct restorative justice in environmental crime? Is this framework adequate to address structural and ecological harm? Under what conditions does restorative justice transform into restorative injustice?

It is argues that without the integration of ecological justice principles and strict normative restrictions, the application of restorative justice in environmental cases risks being distorted into an economic settlement mechanism (Härter, 2023), that perpetuates corporate structural impunity. This article introduces the concept of restorative injustice to describe a situation where justice is fulfilled only procedurally, but fails to achieve substantive ecological restoration, transform corporate behavior, and involve affected communities. Restorative justice turns into restorative injustice when case resolution is oriented solely toward financial compensation without concrete, measurable, and sustainable ecological restoration. Therefore, restorative mechanisms must be limited by minimum ecological restoration parameters and excluded from cases involving large-scale ecological damage, irreversible impacts, and corporations that are repeat offenders (Karianga et al., 2025).

The theoretical contribution of this article lies in expanding the critique of the anthropocentric paradigm of restorative justice towards a more ecocentric approach. Normatively, this article offers a conceptual basis for the development of an ecocentric restorative justice framework, which places concrete and measurable ecological restoration as a prerequisite for the application of restorative mechanisms in environmental crimes. Thus, this article not only criticizes the normative design of the New Criminal Code, but also proposes a direction for the reconstruction of environmental criminal policy that is oriented towards sustainability and intergenerational justice.

This study employs doctrinal legal research using statutory and conceptual approaches. The statutory approach examines the restorative justice framework under Articles 51–54 of Law No. 1 of 2023 concerning the Criminal Code (KUHP), relevant provisions of Law No. 32 of 2009 on Environmental Protection and Management, and other related legal instruments to assess their normative capacity to address environmental crimes involving corporate actors and large-scale ecological harm. Meanwhile, the conceptual approach draws on restorative justice, green criminology, ecological justice, and critical legal studies to critically examine the compatibility of conventional restorative justice frameworks with the distinctive characteristics of environmental harm, particularly its systemic, collective, long-term, and potentially irreversible consequences. These approaches provide the analytical foundation for evaluating whether the existing restorative justice framework adequately accommodates the complexity of environmental crimes and the substantive requirements of ecological justice.

The collected legal materials are examined through interpretative legal analysis and qualitative content analysis to identify normative gaps, conceptual tensions, and the limitations of applying conventional restorative justice principles to environmental criminal cases. Selected judicial decisions, particularly the PT Kallista Alam case (Decision No. 131/Pid.B/2013/PN.MBO), are employed illustratively to contextualize the doctrinal analysis and distinguish formal criminal accountability from substantive ecological restoration. The findings of this analysis inform the reconstruction of restorative justice from an ecological perspective, culminating in the proposed three-tier Ecological Eligibility Test as a conceptual framework for determining the eligibility of restorative justice in environmental criminal cases. Accordingly, the

study remains within the scope of normative and conceptual legal inquiry and does not seek to empirically assess law enforcement practices or the implementation of restorative justice in specific cases.

B. Discussion

1. The Reduction of Restorative Justice to Economic Settlement

Restorative justice in Indonesia cannot be understood solely through Articles 51–54 of Law No. 1 of 2023 on the Criminal Code, as its application forms part of a broader legal framework. The Criminal Code provides the general criminal-law basis for a restorative orientation, while restorative justice is further developed through criminal procedural law and institutional instruments, including Supreme Court Regulation No. 1 of 2024, Prosecutor Regulation No. 15 of 2020, and Police Regulation No. 8 of 2021. These instruments demonstrate that restorative justice operates at different stages of the criminal justice process rather than as a single mechanism derived exclusively from the Criminal Code. Its application therefore cannot be understood as authorizing the resolution of all criminal offences through settlement or termination of proceedings, but must take into account the nature of the offence, the interests of victims and affected communities, and the objectives of criminal punishment.

In environmental cases, this framework must be read together with Law No. 32 of 2009 on Environmental Protection and Management, as amended, which constitutes a specialized sectoral regime providing distinct mechanisms of enforcement, including administrative sanctions, civil liability, compensation, environmental restoration, environmental criminal offences, and corporate liability. The relationship between general criminal law and environmental law is particularly important because ecological harm does not merely produce a conventional relationship between an offender and an individual victim, but may affect communities collectively, ecosystems, biodiversity, ecological functions, and future generations. Accordingly, the restorative orientation of the Criminal Code cannot displace the specific restoration obligations established under environmental legislation. This is particularly significant in corporate environmental crimes, where accountability cannot be reduced to the payment of compensation, but must also address the restoration of ecological functions, participation of affected communities, and prevention of repeated violations.

Restorative justice in environmental law should not be conflated with administrative sanctions, out-of-court dispute settlements, civil compensation, or criminal punishment, as each mechanism serves distinct legal functions and objectives (Agusta, 2024; Budiyanto & Pondayar, 2026; Mulyono et al., 2026). Conceptually, restorative justice, as formulated by Howard Zehr[1] and John Braithwaite[2] constitutes a relational model of justice aimed at repairing harm through the active participation of offenders, victims, affected communities, and other relevant stakeholders. In the context of environmental harm, such restoration extends beyond monetary compensation and requires substantive ecological recovery, community participation, and sustained accountability over time. However, the structure of the legal framework creates a normative risk that environmental law enforcement in Indonesia may frequently reduce restorative outcomes to mere financial compensation. This reflects a reduction of the restorative paradigm into a narrow economic settlement mechanism, in which the effectiveness of legal enforcement is predominantly assessed based on the amount of compensation imposed rather than the degree of ecological

[1] Howard Zehr explains that restorative justice focuses on redressing the victim's losses, holding the offender accountable, and the community's role in rebuilding social harmony through dialogue and reconciliation (Zehr, 1990).
[2] Meanwhile, John Braithwaite explains that restorative justice is achieved through a process of reintegrative shaming, which involves shaming the offender for their wrongdoing while still giving them the opportunity to be accepted back into society (Braithwaite, 1989).

recovery achieved. This tendency is not merely interpretive, but structurally embedded in how environmental harm is legally translated into compensable loss.

This reduction is further enabled by the dominant legal reasoning in environmental adjudication, where ecological harm is increasingly rendered legible through monetary valuation. Within this framework, environmental damage must be translated into calculable economic loss in order to become actionable within the legal system. As a consequence, non-economic dimensions of ecological degradation such as biodiversity loss, disruption of ecosystem functions, and long-term intergenerational ecological risk tend to remain outside the primary focus of legal assessment. Thus, restorative outcomes are pre-shaped by a compensatory logic even before judicial evaluation takes place.

This tendency can be illustrated by the PT Kallista Alam case (Decision No. 131/Pid.B/2013/PN.MBO), in which the court established the corporation's criminal liability for an environmental offence involving the burning of land within the Leuser Ecosystem Area and imposed a criminal fine. While the decision represents a significant development in corporate environmental accountability, the underlying criminal mechanism primarily operates through the imposition of punishment rather than through a comprehensive framework for substantive ecological restoration. From a structural perspective, the reliance on criminal fines provides a legally certain and administratively enforceable form of corporate punishment, but does not necessarily establish a direct legal guarantee that damaged ecological functions will be restored. Such an approach may create a normative gap between criminal accountability and ecological recovery, particularly where environmental harm involves complex, long-term, and potentially irreversible damage to peatland ecosystems. The case therefore illustrates that the formal imposition of criminal liability upon a corporate offender does not, in itself, ensure the realization of restorative objectives, as punishment and ecological restoration constitute related but distinct legal functions. This distinction reveals a potential limitation within the environmental criminal law framework, particularly where the imposition of criminal sanctions is not accompanied by sufficiently clear, measurable, and enforceable requirements for the recovery of ecological functions.

Moreover, although the judgment includes restoration obligations, the absence of precise ecological benchmarks, participatory mechanisms, and robust post-judgment monitoring raises questions regarding the extent to which ecological recovery can be effectively guaranteed. Consequently, the payment of compensation does not necessarily correspond to the actual restoration of ecological functions, thereby exposing the gap between restoration in law and restoration in fact.

This phenomenon of reduction can be understood through the framework of instrumental rationality, in which the law no longer functions as a moral means (value rationality) (Isdiyanto, 2025), but rather as an administrative instrument employed to resolve disputes efficiently. Restorative justice loses its ethical substance because it is operationalized as a tool for the rapid resolution of economic conflicts, particularly when dealing with corporate actors possessing significant structural power and resources (Syam, 2022). This paradigm marks the occurrence of the "juridification of restoration" that is, the moral concept of ecological restoration is reduced to technocratic and economistic legal procedures (Boulot, 2025; Choi, 2007).

The theoretical framework of green criminology developed by Lynch and Stretesky[3], reflects the state's failure to understand environmental crimes as violations of ecological justice (Alba-Patiño et al., 2025). When the state prioritizes financial settlements as the primary form of remediation, justice is measured solely through monetary restitution, rather than the restoration of damaged ecological systems (Putra, 2025). In other words, restorative justice loses its element of

[3] M. J. Lynch dan P. B. Stretesky emphasizes that green criminology aims to develop a perspective on ecological justice that integrates social, economic, and environmental dimensions into the analysis of crime (Lynch & Stretesky, 2014).

ecological justice and becomes a regulatory compromise, a form of legal compromise that serves the interests of economic stability rather than the restoration of nature's integrity.

From the perspective of Critical Legal Studies, this reduction in meaning can be understood as a manifestation of hegemonic legal consciousness (Nelson, 2025), whereby law is used to normalize the dominant interests of a particular economic class, thereby hindering transformations toward just sustainability (Aswandi, 2022; Mahmutovic & Alhamoudi, 2024). The compensation negotiation process, which appears to be restorative, actually reproduces structural inequality, as large economic actors can continue their operations by paying merely symbolic penalties. Thus, restorative justice no longer functions as an effort toward social transformation (Li et al., 2025), but rather as a mechanism legitimizing institutionalized impunity. Yet the purpose of criminal punishment should be to restore the moral, social, and ecological values damaged by the crime (Baumane-Vitolina et al., 2016).

In the Indonesian context, this tendency is reinforced by enforcement practices that prioritize procedural closure and administrative efficiency over ecological verification and long-term environmental monitoring. Particularly in high-value corporate environmental cases, prolonged ecological supervision is often institutionally constrained, thereby strengthening the reliance on financial compensation as a practical substitute for ecological accountability (Fernando, Dahwal, et al., 2025; Fernando, Sinaga, et al., 2025). Taken together, these dynamics illustrate that the reduction of restorative justice to economic settlement is not an isolated judicial practice, but a systemic feature of environmental legal enforcement. It reflects an underlying epistemological constraint in which ecological harm must be translated into economic terms to become legally actionable, thereby shaping both the limits and possibilities of restorative environmental justice.

Therefore, the practice of restorative justice in the context of environmental crimes in Indonesia reflects a form of restorative formalism, where legal procedures are followed but the moral and ecological substance is lacking (Sembada et al., 2025). This reduction creates a paradox between the normative ideals of the new Criminal Code and the reality of legal practice, which remains subject to economic rationality and corporate interests. Based on this analysis, a recontextualization of restorative justice is needed toward a paradigm of restorative environmental justice that does not merely assess justice based on economic restoration, but also restores ecological and moral balance as the primary foundation of a just criminal law.

2. From Restorative Justice to Restorative Injustice

Articles 51–54 provide a restorative orientation within sentencing philosophy, while the procedural implementation of restorative justice is governed by separate criminal justice regulations (Faisal et al., 2024; Nasution et al., 2024). In the context of environmental crimes, the application of restorative mechanisms faces conceptual challenges that cannot always be explained through conventional critiques of restorative justice. This article argues that there are specific circumstances in which mechanisms formally constructed as restorative actually result in a substantive failure of restoration (Noor et al., 2025). To explain this phenomenon, this article employs the term "restorative injustice" as an analytical concept designed to identify the normative limits of applying restorative justice in environmental cases (Procter-Legg et al., 2024).

In this article, "restorative injustice" is not intended as a theoretical category that replaces the theory of restorative justice, but rather as an analytical tool for assessing when restorative goals fail to materialize in environmental criminal law. The concept does not reject restorative justice as a normative ideal; instead, it identifies the circumstances under which restorative mechanisms become disconnected from their underlying ecological objectives and are reduced to procedural compliance rather than substantive environmental recovery. A mechanism can be categorized as restorative injustice if it cumulatively meets several conditions, namely: (a) the case is closed or procedurally resolved through a mechanism claimed to be restorative; (b) restoration is reduced to the payment of compensation or other financial obligations; (c) there is no scientifically verifiable

restoration of ecological functions, ecosystem resilience, or environmental quality; (d) there is no meaningful change in corporate behavior, environmental governance, or compliance mechanisms capable of preventing the recurrence of environmental harm; and (e) the affected public or community is not meaningfully involved in determining, implementing, or evaluating the restoration process. These indicators should not be understood as independent elements, but as an integrated evaluative framework for assessing whether restorative mechanisms have achieved substantive ecological justice rather than merely procedural legitimacy. As illustrated by the PT Kallista Alam case, substantial financial compensation may coexist with considerable uncertainty regarding the actual restoration of ecological functions, demonstrating that the fulfillment of legal obligations does not necessarily correspond to measurable ecological recovery. Under such conditions, restorative justice risks degenerating into what this article conceptualizes as restorative injustice, namely a condition in which legal processes formally satisfy restorative requirements while failing to restore ecological integrity, transform environmentally harmful corporate practices, or secure long-term environmental sustainability.

The concept of restorative injustice also stems from a critique of the anthropocentric paradigm that still dominates the construction of environmental law (Ndaru, 2025). Resolution mechanisms that focus solely on the relationship between the perpetrator and the affected humans often overlook the environment's status as an ecological entity possessing intrinsic value (Petersmann, 2021). Nature, as an ecological entity with intrinsic value, is reduced to an object of damage that is deemed "redeemable" through monetary compensation. Such an approach ignores the reality that environmental damage cannot always be represented or remedied through the logic of economic compensation From the perspective of progressive law, Satjipto Rahardjo argues that the law should not merely enforce formal legal rules but must actively protect those who occupy structurally vulnerable positions and lack the capacity to defend their own interests. This conception of law extends beyond procedural legality by requiring legal institutions to pursue substantive justice and social welfare (Rahardjo, 2007, 2011).

Within the context of environmental crime, the environment itself may be understood as a legally unrepresented interest. Ecosystems, biodiversity, and future generations possess no direct legal voice through which they can articulate ecological loss or demand restoration. Consequently, if progressive law requires the state to stand with those who are structurally powerless, such protection should logically extend to ecological interests whose vulnerability is even more profound because they depend entirely upon legal institutions for their representation and protection. Viewed from this perspective, the failure to recognize ecological restoration as a substantive objective of restorative justice reflects not merely a technical deficiency in environmental regulation but a deeper failure of the law to fulfill its progressive function. Rather than correcting structural ecological injustice, legal mechanisms become confined to facilitating negotiated financial settlements between economically powerful offenders and human victims (Quintas-Soriano et al., 2018). Restoration is thereby reduced to the payment of compensation, while damaged ecosystems remain degraded and ecological functions continue to deteriorate. Environmental losses are transformed into negotiable economic values instead of being treated as injuries requiring measurable ecological recovery. Under such conditions, restorative justice no longer functions as an instrument of social and ecological transformation, but instead becomes what this article conceptualizes as restorative injustice, a condition in which procedural compliance is achieved while substantive ecological justice remains unrealized (Arnscheidt, 2009).

On that basis, "restorative injustice" in this article is positioned not as a general critique of restorative justice, but as a concept that describes specific conditions in which restorative mechanisms lose their transformational capacity in environmental cases. This concept is used to identify the gap between the fulfillment of legal procedures and the achievement of substantive ecological restoration. More specifically, restorative injustice emerges when legal processes

successfully produce procedural closure and formal compliance, yet fail to ensure that ecological functions, environmental resilience, and collective environmental interests are genuinely restored. In such circumstances, the language of restoration remains present within legal discourse, while the substantive objectives of ecological recovery become increasingly uncertain. The concept therefore directs analytical attention not only toward whether restorative mechanisms are applied, but also toward the quality, effectiveness, and ecological consequences of their application (Liu et al., 2024). Thus, the main contribution of this article is not to reject the restorative justice paradigm, but to offer an evaluative framework for determining the normative limits of its application in environmental crimes, particularly those involving corporations and ecological damage that is complex, long-term, and potentially not fully restorable. By introducing the concept of restorative injustice, this article seeks to provide a more precise analytical lens for assessing whether restorative outcomes actually achieve ecological restoration or merely produce the appearance of restoration through legal and administrative procedures.

A further distinction must be made between restorative injustice and what may simply be described as unsuccessful restorative justice. Not every restorative process that fails to achieve its intended objectives necessarily constitutes restorative injustice. In many situations, restorative mechanisms may encounter practical obstacles, such as limited institutional capacity, inadequate resources, administrative inefficiencies, or difficulties in implementation, while still remaining normatively committed to substantive restoration. Restorative injustice arises under different circumstances. It occurs when the design, interpretation, or operation of restorative mechanisms systematically prioritizes procedural completion over substantive restoration. In such situations, the appearance of restoration is maintained, while the ecological consequences that originally justified legal intervention remain largely unresolved. The concept therefore directs attention not merely to the outcome of a legal process but also to the structural conditions that enable procedural success to coexist with substantive ecological failure (Andriyani et al., 2026).

This distinction becomes particularly important in environmental cases because ecological restoration operates according to a temporal logic that differs fundamentally from the logic of legal resolution. Criminal law seeks certainty, finality, and closure, whereas ecological recovery often requires prolonged periods of observation before restoration can be scientifically verified. Peatland rehabilitation, biodiversity recovery, forest regeneration, watershed restoration, and the re-establishment of ecological functions frequently require years or even decades before measurable improvements can be observed. Consequently, a legal process may be considered complete long before ecological restoration has actually occurred. This temporal gap creates a significant risk that legal institutions will equate procedural closure with environmental recovery, even though the ecological effects of the original harm continue to persist. The longer and more complex the ecological recovery process, the greater the possibility that legal restoration and ecological restoration will diverge from one another.

The risk of restorative injustice becomes even greater in environmental crimes involving corporate actors. Unlike conventional crimes, where the relationship between offender and victim is generally identifiable, environmental crimes frequently involve diffuse victims, complex causal chains, and ecological consequences extending beyond immediate human interests. Corporate environmental harm may affect biodiversity, ecosystem services, public health, indigenous communities, local livelihoods, and the environmental interests of future generations. Many of these interests cannot be adequately represented within traditional restorative processes because they lack direct legal representation or measurable bargaining power. As a result, restorative negotiations often become dominated by actors who possess greater economic, political, and institutional resources. Under such conditions, the restorative process may inadvertently reproduce existing inequalities rather than correct them (Shamsidinov et al., 2025). Furthermore, environmental crimes frequently generate forms of harm that are not fully compensable. Financial compensation may address measurable economic losses, yet it cannot easily restore extinct species,

recover destroyed habitats, reverse biodiversity loss, or fully reconstruct ecological relationships that have developed over long periods of time. Certain forms of environmental degradation possess irreversible characteristics that fundamentally challenge the restorative assumption that harm can always be repaired (Gowdy et al., 2011). The greater the scale, duration, and complexity of environmental damage, the more difficult it becomes to justify restorative mechanisms that rely primarily on compensation and negotiated settlement. It is precisely within this gap between legal restoration and ecological reality that restorative injustice emerges as a useful analytical concept for evaluating the normative limits of restorative justice in environmental criminal law.

The practice of restorative justice in cases of environmental crime in Indonesia appears to resemble a form of juridical pacification,[4] whereby the law functions primarily to diffuse social conflict without addressing the structural causes of ecological injustice. Justice is transformed into an administrative ritual, while damaged ecosystems remain in conditions of long-term or even irreversible degradation. In this sense, legal mechanisms that are formally characterized as restorative may contribute to *ecological depoliticization* by reframing environmental harm as a technical or economic problem rather than a matter of ecological justice. This tension highlights the need for clearer normative criteria to determine the appropriate scope and limits of restorative justice in cases of environmental crime, as summarized in Table 1.

Tabel 1.
Analytical Distinction Between Restorative Justice and Restorative Injustice in Environmental Law Enforcement

Dimensions of Analysis	Restorative Justice (Normative-Ideal Framework)	Restorative Injustice (Empirical-Distorted Manifestations)	Legal Implications
Severity of Environmental Harm	Minor environmental harm with limited ecological consequences	Serious environmental harm resulting in substantial ecosystem degradation	Restorative justice should be restricted to low-severity environmental offences
Recoverability of Damage	Environmental damage is reversible and capable of restoration within a measurable timeframe	Environmental damage is irreversible, long-term, or scientifically uncertain to restore	Cases involving irreversible ecological damage should proceed through formal criminal prosecution
Measurability of Restoration	Restoration targets, indicators, and monitoring mechanisms can be clearly established	Ecological recovery cannot be objectively measured or verified	Restorative agreements must include measurable ecological restoration obligations
Nature of the Offender	Individual offenders or small-scale actors with limited environmental impact	Corporate repeat offenders or entities with a history of environmental violations	Repeat corporate offenders should be excluded from restorative mechanisms
Scale of Impact	Localized environmental harm affecting a limited geographic area	Large-scale environmental damage affecting multiple ecosystems or regions	Large-scale environmental crimes require conventional criminal enforcement
Geographical Scope	Local impacts confined to a specific community or ecosystem	Transboundary impacts affecting multiple	Transboundary environmental crimes should not be resolved

[4] Juridical pacification is a critical concept in legal studies and the sociology of law that refers to the function of law as a tool for mitigating, calming, or controlling social conflict, without actually resolving the underlying root causes of injustice.

Dimensions of Analysis	Restorative Justice (Normative-Ideal Framework)	Restorative Injustice (Empirical-Distorted Manifestations)	Legal Implications
		jurisdictions or ecological regions	through restorative mechanisms
Ecological Public Interest	Limited impact on biodiversity, ecosystem integrity, or public ecological interests	Significant threats to biodiversity, protected ecosystems, or ecological public goods	Cases involving high ecological public interest should remain subject to judicial adjudication
Corporate Accountability	Offender demonstrates institutional reform, compliance measures, and preventive commitments	Settlement focuses solely on compensation without behavioural or institutional change	Ecological restoration must be accompanied by corporate governance reforms
Community Participation	Meaningful participation of affected communities throughout the restoration process	Communities are excluded from decision-making and post-settlement monitoring	Public participation should constitute a mandatory element of restorative processes
Primary Objective	Ecological recovery, prevention of future harm, and restoration of social-ecological relationships	Closure of disputes through financial compensation or negotiated settlement	The success of restorative justice should be assessed through ecological outcomes rather than monetary payments

Source: author's analysis results

That table demonstrates that the distinction between restorative justice and restorative injustice in environmental law enforcement is not merely procedural, but fundamentally concerns the conditions under which restoration can legitimately serve as a substitute for conventional criminal punishment. The table shows that the appropriateness of restorative justice depends upon a series of ecological and institutional thresholds, including the severity of environmental harm, the recoverability of damaged ecosystems, the measurability of restoration outcomes, the nature of the offender, and the broader public ecological interests affected by the offence. Consequently, restorative justice cannot be understood as a universally applicable sentencing philosophy, but rather as a conditional mechanism whose legitimacy is contingent upon the possibility of achieving verifiable ecological recovery (Syaifullah, 2026).

This distinction becomes particularly important in the context of environmental economic crimes, where ecological losses often extend beyond identifiable victims and affect collective, intergenerational, and ecological interests. Unlike conventional crimes, environmental harm may be cumulative, scientifically uncertain, geographically dispersed, and in some cases irreversible. Under such circumstances, the restorative paradigm encounters significant normative limitations because the object of restoration is no longer a social relationship that can be reconciled through agreement, but an ecological system whose recovery may require decades, substantial institutional intervention, or may not be fully achievable at all. The greater the scale, duration, and ecological significance of the damage, the weaker the normative justification for resolving the matter through restorative mechanisms.

The table further illustrates that restorative injustice emerges not simply from the failure of restoration, but from the misapplication of restorative justice to cases that exceed its legitimate scope. This occurs when mechanisms originally designed for minor, measurable, and reversible harms are extended to corporate environmental offences involving large-scale ecological degradation, repeat violations, transboundary impacts, or significant ecological public interests. In such cases, legal closure may be achieved through compensation agreements, negotiated settlements, or formal restoration commitments, while the underlying ecological damage remains unresolved. The result is a form of procedural success that masks substantive ecological failure

(Percival et al., 2024). Accordingly, the contribution of this article is not to reject restorative justice in environmental law altogether, but to establish normative boundaries for its application. Restorative justice should remain available only where environmental harm is limited, reversible, measurable, and non-systemic. Conversely, offences involving serious ecological damage, corporate recidivism, irreversible ecosystem loss, or substantial public ecological interests should remain subject to conventional criminal enforcement. Within this framework, the concept of restorative injustice functions as an analytical tool for identifying the point at which restorative mechanisms cease to promote ecological recovery and instead become instruments for the procedural normalization of environmental harm.

3. Normative Limits of Restorative Justice in Environmental Crimes under Indonesia's New Criminal Code

The normative basis for the restorative approach in the New Criminal Code is actually set forth in Article 51 of Law No. 1 of 2023, which positions criminal punishment not only as a means of retribution, but also as an instrument for the prevention of criminal acts, the rehabilitation of offenders, conflict resolution, the restoration of balance, and the creation of a sense of security and peace in society (Faisal et al., 2024). This formulation indicates a significant shift from a retributive paradigm toward a restorative one. However, when applied to environmental crimes, a fundamental issue arises regarding what is meant by "restoring balance" (K. Saputra et al., 2026). Article 51 of the New Criminal Code establishes several objectives of punishment, including crime prevention, offender rehabilitation, conflict resolution, restoration of balance, and the creation of social peace. Although these objectives reflect a restorative orientation, the provision remains conceptually underdeveloped when applied to environmental economic crimes. The phrase "restoration of balance" is left undefined and appears to assume that criminal harm primarily consists of social conflict among human actors. Consequently, the provision provides no guidance as to whether balance includes ecological integrity, ecosystem functions, biodiversity recovery, or intergenerational environmental interests.

This conceptual ambiguity becomes particularly problematic because environmental crimes differ fundamentally from conventional offenses. In ordinary crimes, balance may reasonably be understood as the restoration of disturbed legal relations between offenders, victims, and society. Environmental crimes, however, disrupt ecological systems whose recovery is governed not by legal agreements but by complex natural processes that often require scientific assessment and long-term monitoring. Ecological degradation may continue long after legal proceedings have concluded, while certain forms of environmental loss, including biodiversity decline, peatland degradation, or ecosystem fragmentation, may be only partially reversible or entirely irreversible. Consequently, the legal objective of restoring balance cannot simply be equated with the settlement of disputes between human actors. The absence of explicit ecological parameters therefore creates significant normative uncertainty. Judges retain broad discretion to interpret restoration according to social, economic, or administrative considerations without being required to determine whether ecological functions have actually been restored. This shifts the focus of sentencing from ecological outcomes toward procedural completion, allowing legal closure to be achieved independently of environmental recovery. As a consequence, Article 51 implicitly privileges procedural certainty over ecological effectiveness and creates a normative space in which symbolic restoration may be mistaken for substantive restoration. Within such circumstances, restorative justice risks evolving into restorative injustice, where the legal process is considered complete despite the continued degradation of the environment that originally justified criminal intervention.

Article 52 provides that punishment shall not be intended to degrade human dignity. As a principle of modern criminal law, this provision represents an important limitation upon excessive state punishment and reflects the constitutional commitment to the protection of fundamental

human rights. Nevertheless, its normative orientation remains predominantly anthropocentric. While the provision expressly recognizes the dignity of offenders as a value requiring protection throughout the sentencing process, it contains no corresponding recognition that ecological integrity may itself constitute a legally protected interest within the philosophy of punishment. This omission becomes particularly significant in environmental economic crimes because the principal harm extends beyond identifiable human victims. Environmental destruction affects ecological systems that sustain biodiversity, ecosystem services, public health, indigenous communities, and the environmental rights of future generations (R. Saputra et al., 2026). Yet Article 52 does not require sentencing authorities to consider whether punishment should also preserve or restore these broader ecological interests. Consequently, the normative balance established by the provision becomes asymmetrical: human dignity is explicitly protected, whereas ecological integrity remains only indirectly acknowledged through separate environmental legislation rather than within the general sentencing philosophy itself.

From a broader normative perspective, this asymmetry reinforces the traditional anthropocentric structure of criminal law, whereby the environment continues to be treated primarily as an object whose protection depends upon human interests rather than as a legal interest possessing intrinsic value. Such an approach becomes increasingly difficult to justify in environmental criminal law because ecological damage frequently persists independently of immediate human injury. By prioritizing the dignity of offenders while remaining silent regarding the restoration of damaged ecosystems, Article 52 inadvertently strengthens a sentencing framework in which humanitarian considerations receive greater normative visibility than ecological restoration itself. This imbalance increases the possibility that restorative mechanisms will prioritize the proportionality of punishment while overlooking whether the ecological consequences of environmental crime have actually been remedied.

Article 53 requires judges to uphold both law and justice and further provides that justice should prevail whenever it conflicts with legal certainty. At first glance, this formulation appears to strengthen judicial discretion by recognizing that the mechanical application of legal rules may not always produce substantively fair outcomes. However, the provision leaves unresolved a more fundamental question: what conception of justice should guide judicial discretion in environmental criminal cases? Unlike conventional criminal offenses, environmental crimes involve competing forms of justice that frequently extend beyond the interests of the immediate parties. Ecological justice requires consideration not only of present victims but also of ecosystem sustainability, biodiversity conservation, public ecological interests, and the rights of future generations. Nevertheless, Article 53 contains no explicit requirement that these ecological considerations be integrated into judicial reasoning when determining an appropriate sentence or evaluating restorative outcomes. Consequently, judges retain broad discretion to define justice according to economic, developmental, administrative, or social considerations without any normative obligation to prioritize ecological restoration.

This broad discretion becomes particularly problematic in environmental economic crimes because judicial balancing frequently occurs within contexts involving investment, employment, regional development, and corporate economic interests. In the absence of ecological benchmarks, judges may legitimately conclude that maintaining business continuity, protecting economic stability, or preserving social order better serves the interests of justice than imposing sanctions designed to maximize ecological restoration. Such reasoning may remain formally consistent with Article 53 while simultaneously undermining the ecological objectives of environmental criminal law. Accordingly, the principal limitation of Article 53 lies not in the existence of judicial discretion itself, but in the absence of normative guidance concerning the ecological content of justice. By failing to specify that justice in environmental criminal cases must include measurable ecological restoration, ecosystem recovery, and the protection of long-term environmental interests, the provision leaves substantial room for restorative settlements that achieve procedural

fairness without ensuring ecological justice. Under these conditions, Article 53 is unable to function as an effective normative safeguard against the emergence of restorative injustice in environmental law enforcement.

Yet article 54 presents the most significant normative limitation in the application of restorative justice to environmental economic crimes. The provision enumerates various sentencing considerations, including the offender's motive, personal circumstances, attitude after committing the offense, economic condition, future prospects, and the impact of punishment upon the offender. This structure reflects a conventional sentencing model developed primarily for interpersonal crimes involving identifiable offenders and victims, where punishment seeks to balance individual culpability with personal mitigation. However, environmental economic crimes differ fundamentally because the principal harm extends beyond individual victims and affects ecological systems, biodiversity, public environmental interests, and future generations. Despite these distinctive characteristics, Article 54 contains no explicit requirement that judges consider the scale of ecological degradation, the reversibility of environmental damage, cumulative ecological impacts, transboundary pollution, biodiversity loss, ecosystem resilience, or the scientific feasibility of long-term environmental recovery. Instead, ecological harm is implicitly subsumed within the broad and indeterminate category of the "impact upon victims," thereby reducing complex ecological destruction to a secondary consideration within a sentencing framework designed primarily around human interests. Such an approach overlooks the reality that environmental harm frequently continues long after individual losses have been compensated and often affects ecological entities that cannot be adequately represented as conventional legal victims.

More importantly, several mitigating factors recognized by Article 54, including the offender's economic circumstances, future prospects, and the potential consequences of punishment may inadvertently produce disproportionate advantages for corporate offenders. Corporations responsible for significant environmental damage may invoke their economic contribution, employment generation, strategic investment, or potential financial losses as mitigating considerations during sentencing. Although these factors are not inherently inappropriate within general criminal law, their application to environmental crimes risks shifting judicial assessment away from ecological accountability toward economic preservation. Consequently, sentencing may become influenced by the perceived economic value of the offender rather than by the magnitude of ecological harm that has occurred. This structural imbalance demonstrates that Article 54 remains grounded in an anthropocentric and offender-oriented philosophy of sentencing. The provision devotes detailed attention to factors relating to the offender while providing no comparable normative guidance concerning ecological recovery as an independent sentencing consideration. As a result, the interests of damaged ecosystems receive significantly less normative visibility than the personal circumstances of those responsible for environmental destruction. Such asymmetry weakens the capacity of sentencing to perform its ecological function and increases the likelihood that environmental accountability will be balanced against economic efficiency rather than against scientifically verifiable ecological restoration. Accordingly, the principal weakness of Article 54 does not merely lie in the omission of ecological criteria, but in the underlying sentencing philosophy that continues to conceptualize environmental crimes through the logic of conventional criminal law. Without explicit ecological benchmarks and mandatory consideration of ecosystem recovery, restorative justice may gradually transform into restorative injustice, whereby legal outcomes successfully resolve criminal proceedings, stabilize economic interests, and manage social conflict, while the restoration of damaged ecological systems remains uncertain, incomplete, or entirely unrealized.

These provisions demonstrate that the Environmental Protection and Management Law adopts a regulatory logic that is substantially more ecocentric than the sentencing philosophy reflected in the New Criminal Code. Rather than treating environmental harm merely as a dispute between

offenders and victims, the Law recognizes ecological damage as an independent legal wrong requiring concrete environmental restoration. Liability is therefore directed not only toward compensating losses but also toward recovering ecological functions that have been impaired. In this respect, environmental restoration constitutes a substantive legal obligation rather than a discretionary consequence of criminal sentencing. Nevertheless, this normative framework also reveals an important conceptual tension. While Law No. 32 of 2009 establishes obligations for environmental restoration, the New Criminal Code does not incorporate equivalent ecological criteria into its general sentencing objectives or sentencing considerations under Articles 51–54. Consequently, the criminal justice system operates within two normative paradigms that are not fully harmonized. Environmental legislation emphasizes ecological recovery as the primary objective of legal intervention, whereas the New Criminal Code continues to frame punishment primarily through offender-oriented considerations such as rehabilitation, conflict resolution, proportionality, and individualized sentencing.

This lack of normative integration creates significant practical implications for environmental criminal law enforcement. Although environmental legislation requires ecological restoration, sentencing decisions remain guided by a general criminal law framework that provides no measurable standards for determining whether ecological recovery has actually been achieved. As a result, the success of environmental law enforcement may be evaluated according to procedural compliance, compensation payments, or the formal completion of legal obligations, even where ecosystem functions remain degraded or ecological recovery cannot be scientifically verified. It is precisely within this normative gap that restorative justice becomes vulnerable to transformation into restorative injustice, as legal restoration may be declared complete despite the continued persistence of environmental harm.

Furthermore, Articles 98 to 100 classify environmental pollution and destruction as criminal offenses that endanger not only individual or economic interests but also broader public ecological interests. This classification reflects a normative recognition that environmental harm is inherently collective, diffuse, and long-term in nature. In addition, Articles 116 to 119 extend criminal liability to corporate actors and introduce additional sanctions in the form of environmental restoration measures, thereby reinforcing the idea that punitive responses must be accompanied by ecological remediation obligations. Within this framework, environmental law in Indonesia appears to move beyond a purely compensatory logic and instead acknowledges that ecological damage cannot be adequately addressed through monetary restitution alone. However, when juxtaposed with the sentencing philosophy embedded in Article 51 of the New Criminal Code, a normative disjunction emerges. While Law No. 32 of 2009 explicitly foregrounds environmental restoration as a substantive legal objective, the New Criminal Code remains primarily oriented toward human-centered conflict management without clearly defining ecological restoration as an integral component of "restoring balance." This divergence creates an interpretive gap in which environmental harm may still be legally concluded through procedural settlement mechanisms, even when ecological recovery has not been substantively achieved. In this sense, the coexistence of these two legal frameworks simultaneously advances and constrains restorative justice, producing a tension in which ecological restoration is formally recognized yet normatively underdetermined.

From the perspective of this article, the PT Kallista Alam case does not necessarily indicate an absence of legal mechanisms for addressing ecological harm, but rather illustrates a potential gap between the establishment of corporate criminal accountability and the realization of ecological restoration. Decision No. 131/Pid.B/2013/PN.MBO demonstrates that criminal law is capable of imposing liability upon a corporate actor for environmental wrongdoing and providing a punitive response through criminal sanctions. However, the formal imposition of criminal punishment does not, in itself, guarantee that the ecological functions affected by the offence will be substantively and measurably restored (Rahmah et al., 2025). This distinction between

accountability in law and restoration in fact creates the normative space in which restorative injustice may emerge: a condition in which a legal response may satisfy the requirements of criminal accountability while leaving the achievement of substantive ecological restoration insufficiently guaranteed.

It is in this context that the concept of restorative injustice gains its relevance. This article defines restorative injustice as a situation in which mechanisms claimed to be restorative succeed in procedurally closing a case but fail to achieve substantive ecological restoration. This condition is marked by at least five indicators: first, the resolution of the case results in the formal closure of the conflict; second, losses are reduced to financial compensation; third, damaged ecological functions are not measurably restored; fourth, there is no change in corporate behavior or governance; and fifth, affected communities are not meaningfully involved in the restoration process. In such situations, the law no longer functions as an instrument of ecological transformation, but rather as a mechanism of social stabilization that maintains the very structures of production and exploitation that are the source of environmental damage. In other words, justice is achieved in a procedural sense, but fails to materialize in an ecological sense.

4. The Distinctive Nature of Environmental Crimes: Comparative Perspectives on the Limits of Restorative Justice

Environmental crimes possess characteristics that fundamentally distinguish them from conventional criminal offences and, consequently, challenge the underlying assumptions of classical restorative justice. Traditional restorative justice theory, as developed by Howard Zehr and John Braithwaite, is premised upon crimes that produce identifiable victims, direct interpersonal harm, and relationships capable of being repaired through dialogue, accountability, and reconciliation. Within this framework, restoration primarily concerns rebuilding social relationships that have been disrupted by criminal conduct. Environmental crimes, however, operate according to an entirely different logic. Rather than producing individualized victims and immediately observable losses, they frequently generate collective, cumulative, and long-term ecological harm that extends beyond the temporal and spatial boundaries of ordinary criminal law. Consequently, the restorative assumptions underlying conventional criminal justice become increasingly difficult to apply when the principal victim is not a person but an ecosystem whose recovery depends upon complex ecological processes rather than negotiated agreements.

The distinctive nature of environmental crime is first reflected in the problem of diffuse victimization. Unlike conventional offences where victims are generally identifiable individuals capable of participating directly in restorative processes, environmental crimes affect multiple categories of victims simultaneously. Pollution, deforestation, illegal mining, hazardous waste disposal, and biodiversity destruction may harm surrounding communities, indigenous peoples, future generations, wildlife populations, ecosystem services, and ecological systems whose degradation cannot be represented through a single legal subject (Tekayadi et al., 2025). The fragmentation of victimhood creates significant procedural difficulties because restorative justice relies heavily upon victim participation as a mechanism for determining appropriate forms of accountability and restoration. In environmental cases, however, many of the principal victims possess no legal personality capable of expressing ecological loss or negotiating restoration. Ecosystems cannot participate in mediation, biodiversity cannot articulate injury, and future generations cannot consent to settlements that permanently affect environmental conditions inherited from previous generations. Consequently, restorative processes risk privileging those interests that are institutionally represented while marginalizing ecological interests that remain legally silent.

Environmental crimes are further distinguished by the cumulative and delayed nature of ecological harm. Unlike conventional crimes whose consequences are generally immediate and observable, environmental degradation frequently develops gradually over extended periods.

Toxic contamination, groundwater pollution, biodiversity decline, peatland degradation, and climate-related ecological disruption often remain scientifically undetectable until significant damage has already occurred. This latency effect complicates both criminal liability and restorative intervention because the full ecological consequences of environmental harm frequently emerge long after legal proceedings have concluded (Arifin et al., 2026; Doelman et al., 2023). A corporation may successfully complete a restorative agreement, satisfy financial obligations, and formally resolve legal proceedings while ecological deterioration continues to unfold over subsequent decades. Such temporal asymmetry exposes an important conceptual limitation of restorative justice, whose procedural emphasis on dispute resolution does not necessarily correspond with the considerably longer timeframe required for ecological recovery.

Scientific uncertainty further differentiates environmental crimes from ordinary criminal offences. Ecological systems operate through interconnected biological, hydrological, geological, and climatic processes that frequently resist precise prediction. Determining whether damaged ecosystems have genuinely recovered requires long-term scientific monitoring involving biodiversity indicators, ecosystem resilience, hydrological stability, species regeneration, soil quality, and numerous ecological variables extending beyond conventional legal expertise. Consequently, ecological restoration cannot simply be presumed from the completion of legal obligations. A restoration agreement may formally satisfy judicial requirements while the ecological functions that originally justified criminal intervention remain only partially restored or permanently impaired. This scientific uncertainty fundamentally distinguishes environmental restoration from interpersonal reconciliation because legal certainty frequently precedes scientific certainty regarding ecological recovery (Percival et al., 2024).

Another distinctive characteristic concerns the possibility of irreversible environmental harm. Classical restorative justice implicitly assumes that harm is, at least in principle, capable of being repaired through appropriate restorative measures. Environmental crimes frequently challenge this assumption. Species extinction, destruction of primary forests, coral reef degradation, peatland collapse, contamination of groundwater aquifers, and ecosystem fragmentation often produce ecological consequences that cannot be fully reversed regardless of the amount of financial compensation provided or restoration activities undertaken (van Uhm, 2024). Certain ecological losses therefore possess irreversible characteristics that fundamentally exceed the restorative capacity of conventional legal mechanisms. Under such circumstances, negotiated settlements may provide procedural closure while leaving substantive ecological damage permanently unresolved.

These conceptual limitations have increasingly influenced the development of environmental criminal law in several jurisdictions. Rather than treating restorative justice as a universally applicable sentencing philosophy, comparative legal experience demonstrates a growing tendency to impose normative restrictions on its application in environmental cases. Restoration is increasingly understood not as an alternative to environmental accountability but as an obligation that must itself be scientifically measurable, institutionally monitored, and ecologically verifiable.

New Zealand provides an important illustration of this approach. Environmental offences prosecuted under the Resource Management Act have, in certain circumstances, incorporated restorative processes that involve offenders, affected communities, environmental authorities, and other relevant stakeholders (Wong, 2026). However, restorative mechanisms are not regarded as substitutes for environmental accountability. Instead, restoration agreements generally require concrete ecological commitments, including habitat rehabilitation, pollution remediation, environmental monitoring, and community participation in restoration planning. Judicial consideration therefore extends beyond financial compensation toward evaluating whether ecological functions are realistically capable of recovery (Hamilton, 2021). Restorative justice is accordingly employed only where ecological restoration remains practically achievable and consistent with broader environmental protection objectives.

A comparable tendency may also be observed in Australia, where environmental enforcement increasingly integrates restorative principles with regulatory mechanisms such as Environmental Protection Orders and corporate restoration obligations. Rather than relying solely upon negotiated compensation, environmental authorities frequently require corporations responsible for ecological harm to implement detailed restoration plans, undertake long-term environmental rehabilitation, finance ecological monitoring, and demonstrate institutional reforms designed to prevent future environmental violations (Forsyth & Tepper, 2024). These obligations reflect an important conceptual distinction between compensating environmental loss and restoring ecological integrity. Restoration is therefore understood as an ongoing regulatory process rather than a single financial obligation capable of concluding environmental responsibility.

Within the European Union, the evolution of environmental criminal law demonstrates an even stronger movement toward ecological accountability. The Environmental Crime Directive emphasizes that criminal sanctions should contribute to preventing environmental harm and ensuring effective restoration wherever possible (Klimek, 2026). Environmental damage is not regarded as a purely economic loss capable of replacement through financial compensation alone. Instead, Member States are encouraged to ensure that offenders remain responsible for restoring damaged ecosystems and preventing continuing environmental degradation (Zębek & Solodov, 2026). The directive therefore reflects an increasingly ecocentric understanding of environmental criminal law in which ecological restoration constitutes an essential component of environmental accountability rather than an optional complement to criminal punishment.

These comparative developments reveal a common normative pattern. Although the legal systems of New Zealand, Australia, and the European Union differ substantially in institutional design and environmental governance, all demonstrate a growing recognition that restorative justice cannot be applied indiscriminately to every category of environmental crime (Darmawan et al., 2024). Its legitimacy depends upon identifiable ecological conditions, including the reversibility of environmental damage, the feasibility of scientific restoration, meaningful community participation, effective corporate accountability, and long-term ecological monitoring. Restorative mechanisms therefore operate within clearly identifiable normative boundaries rather than functioning as universally available alternatives to criminal prosecution.

The Indonesian framework presently lacks comparable normative thresholds. Articles 51–54 of Law No. 1 of 2023 articulate restorative objectives in broad and predominantly anthropocentric language but provide no explicit guidance concerning when restorative justice remains appropriate for environmental crimes involving irreversible ecological degradation, cumulative environmental loss, corporate recidivism, or transboundary ecological impacts. Neither the New Criminal Code nor Law No. 32 of 2009 establishes measurable ecological eligibility criteria capable of distinguishing cases suitable for restorative resolution from those requiring conventional criminal prosecution. Consequently, environmental restoration risks being interpreted primarily through procedural compliance and financial compensation rather than scientifically verifiable ecological recovery. It is precisely this normative gap that enables restorative justice to evolve into what this article conceptualizes as restorative injustice, namely a condition in which legal processes formally satisfy restorative requirements while failing to restore ecological integrity, transform environmentally harmful corporate practices, or secure long-term environmental sustainability.

5. Normative Reconstruction of Restorative Justice in Environmental Criminal Law: Towards an Ecological Eligibility Test

The preceding analysis demonstrates that the principal limitation of Indonesia's restorative justice framework lies not in the recognition of restorative objectives, but in the absence of ecological and legal thresholds determining when restorative intervention is appropriate in environmental criminal cases. Articles 51–54 of the New Criminal Code provide a broad restorative orientation, yet do not establish specific criteria concerning ecological recoverability,

scientific verification, biodiversity loss, victim representation, corporate accountability, or long-term monitoring. Consequently, restorative mechanisms may risk being assessed primarily through procedural agreement or compensation rather than through the substantive recovery of ecological functions (Hamilton, 2021).

To address this gap, this article proposes the Ecological Eligibility Test as a normative gatekeeping framework for determining whether restorative justice may legitimately influence environmental criminal proceedings. The test does not create a new form of punishment or replace judicial discretion. Rather, it establishes ecological parameters within which such discretion should operate. Its central inquiry is not whether an offender is willing to compensate or reconcile, but whether the environmental harm remains scientifically recoverable, objectively measurable, institutionally manageable, and capable of being addressed through meaningful participation and long-term monitoring. The assessment should therefore consider the magnitude and public significance of ecological harm, recoverability, biodiversity impact, representational adequacy, corporate accountability, geographical complexity, and the availability of independent monitoring. Importantly, none of these factors should operate mechanically. A first-time offender should not automatically qualify, diffuse victimization should not automatically exclude restorative intervention, and transboundary harm should trigger stronger requirements of representation, coordination, and monitoring rather than constitute an absolute bar (Forsyth & Tepper, 2024). The principal criteria are summarized in Table 2.

Table 2.
Proposed Ecological Eligibility Test for the Application of Restorative Justice in Environmental Crimes

Ecological Criteria	Eligible for Restorative Justice	Not Eligible for Restorative Justice
Environmental damage	Reversible and scientifically recoverable	Irreversible ecological degradation
Scale of impact	Localized environmental harm	Large-scale or cumulative ecosystem damage
Victim characteristics	Clearly identifiable affected communities	Diffuse ecological and intergenerational victims
Ecological restoration	Scientifically measurable and independently verifiable	Restoration uncertain or impossible to verify
Biodiversity impact	Limited biodiversity disturbance	Significant biodiversity loss or protected ecosystem destruction
Corporate history	First-time offender with demonstrated compliance	Repeat corporate offender or systematic environmental violations
Geographical impact	Single jurisdiction	Transboundary environmental impacts
Corporate accountability	Institutional reform and long-term compliance commitments	Financial compensation without governance reform
Community participation	Meaningful participation throughout restoration	Exclusion of affected communities from decision-making
Monitoring mechanism	Independent long-term ecological monitoring available	No post-settlement ecological supervision

Source: author's analysis results

The criteria in Table 2 should not be interpreted mechanically. In particular, corporate history, diffuse victimization, or transboundary impact should not independently determine eligibility. A first-time offender may still cause catastrophic ecological damage, while diffuse victims do not necessarily make restoration impossible if their interests can be adequately represented. Similarly,

transboundary harm should trigger stronger requirements concerning participation, jurisdictional coordination, scientific assessment, and monitoring rather than constitute an automatic exclusion. The decisive inquiry is whether the ecological harm can be meaningfully addressed through a legally enforceable and scientifically verifiable restoration process.

For the test to operate as a legal mechanism rather than a policy checklist, its application should be distributed across the relevant stages of criminal proceedings. Investigators or prosecutors may conduct an initial screening to identify cases requiring ecological assessment, while environmental authorities and independent experts provide the scientific basis concerning ecological condition, contamination, biodiversity, hydrology, restoration feasibility, and ecosystem resilience. The prosecutor may then assess whether the proposed restorative mechanism is legally and ecologically justified, while the court retains final authority where restorative intervention affects adjudication or sentencing. Independent post-settlement monitoring is necessary to determine whether restoration has produced measurable ecological recovery rather than merely satisfied formal or financial obligations.

The legal consequences of the test should follow a three-tier model, rather than a binary distinction between eligible and ineligible cases. First, excluded cases are those in which ecological restoration is scientifically impossible, essential ecological functions have been irreversibly lost, or the magnitude and public significance of the harm make restorative substitution inappropriate. Restorative measures may nevertheless remain necessary as additional obligations, but they cannot replace prosecution or criminal punishment. Second, conditionally eligible cases are those in which restoration remains scientifically feasible and measurable, affected interests can be adequately represented, corporate accountability can be demonstrated, and effective monitoring can be secured. Restorative intervention may operate in these cases only subject to strict ecological, participatory, and monitoring conditions. Third, supplementary restoration cases are those in which criminal prosecution and punishment remain necessary because of the seriousness of the offence, while restoration operates alongside criminal sanctions to address the resulting ecological damage. This third category is particularly important because it rejects the false dichotomy between punishment and restoration: environmental accountability may require both criminal responsibility for the unlawful conduct and ecological restoration for its consequences.

The framework must also address failure of restoration. Where ecological recovery fails despite good-faith compliance because scientific predictions prove inadequate, the appropriate response may involve modification of the restoration plan, additional remediation, or extended monitoring. Where failure results from negligence or deliberate non-compliance, the applicable legal consequences should be activated in accordance with the relevant criminal, environmental, administrative, or corporate-liability framework, including termination of the restorative arrangement where legally permissible and continuation or strengthening of criminal accountability. The Ecological Eligibility Test therefore does not create independent sanctions; rather, it provides a structured basis for determining whether existing legal consequences should remain operative when restorative obligations are not fulfilled.

The normative significance of the test lies in its reconstruction of restorative justice from agreement-centred resolution toward ecological adequacy. Environmental crimes cannot be assessed solely through the relationship between offender and identifiable victim because their consequences may extend to ecosystems, biodiversity, communities, public ecological interests, and future generations. Restoration must consequently be understood as the scientifically verifiable recovery of ecological integrity, supported by institutional accountability and long-term governance. In this framework, restorative injustice emerges where restorative procedures are formally satisfied despite the absence of genuine ecological recovery, while the Ecological Eligibility Test functions as the normative mechanism for preventing that outcome. The legitimacy of restorative justice in environmental criminal law therefore depends not merely on whether a

case can be settled, but on whether restoration can meaningfully address the ecological harm while preserving the necessary function of criminal accountability.

C. Conclusion

This article concludes that the restorative justice framework under Indonesia's criminal law regime effective from 2026 remains normatively underdeveloped in addressing environmental crimes that cause systemic, irreversible, cumulative, or long-term ecological harm. The central problem does not lie in the restorative justice paradigm itself, but in the absence of clearly articulated ecological criteria for determining when restorative intervention is appropriate and when settlement-oriented mechanisms risk undermining environmental criminal law's protective purposes. Without such criteria, restorative justice may produce what it terms "restorative injustice": formal legal closure without ecological recovery, sustained offender accountability, or meaningful participation by affected communities. In environmental cases, compensation, settlement, offender rehabilitation, or fulfilment of judicial obligations cannot, on their own, establish that justice has been achieved. A restorative outcome must also demonstrate recovery of ecological functions, treatment of residual harm, and prevention of further environmental damage.

To address this gap, the article proposes the Ecological Eligibility Test to determine whether an environmental criminal case is suitable for restorative intervention. The test places the characteristics and consequences of ecological harm at the centre of the assessment. It considers the scale and severity of damage; the reversibility of its effects; the scientific measurability and verifiability of recovery; the likelihood of recurrence; and transboundary, cumulative, or intergenerational consequences. These criteria help assess whether restoration is achievable and whether a restorative process can advance environmental protection. Restorative justice should not be presumed applicable merely because a case satisfies general requirements for settlement. Its use must depend on the ecological circumstances and on whether proposed measures can secure outcomes consistent with environmental law.

The test is operationalized through a three-tier model that differentiates cases according to the nature, severity, and recoverability of ecological harm. Tier I permits restorative intervention where damage is limited, localized, measurable, and reversible, and recovery can be verified through objective indicators. Restorative measures may be appropriate if obligations are specific, enforceable, and proportionate to the harm. Tier II permits intervention only with enhanced safeguards where damage is substantial but recoverable. Safeguards include scientifically grounded restoration plans, independent verification, judicial supervision, long-term monitoring, and meaningful participation by affected communities. They ensure that restorative commitments produce measurable environmental improvements rather than merely symbolic or procedural outcomes.

Tier III excludes restorative justice as the primary means of resolving cases involving irreversible, systemic, cumulative, transboundary, or intergenerational harm, as well as serious or repeated corporate offending. In these circumstances, settlement-oriented resolution may fail to reflect the gravity and wider consequences of the conduct. Criminal accountability must remain central, while ecological restoration must continue as a mandatory and independently enforceable obligation. Exclusion from restorative resolution does not make restoration irrelevant; it means restoration cannot substitute for criminal responsibility or justify premature closure of proceedings. This distinction is crucial where damage extends beyond identifiable victims, persists over time, or threatens future generations.

The contribution of this article is not to reject restorative justice or advocate an exclusively punitive response to environmental crime. Rather, it establishes ecological limits and substantive conditions for the legitimate use of restorative mechanisms. By combining the Ecological Eligibility Test with the three-tier model, the proposed framework provides a normative basis for distinguishing genuine ecological restoration from restorative injustice. It aligns restorative

intervention with ecological integrity, corporate accountability, community participation, and intergenerational justice. For Indonesian environmental criminal law, restorative justice should operate as a conditional mechanism, not as a general alternative to prosecution or punishment. Its legitimacy depends on whether it advances ecological recovery and environmental law's preventive and protective objectives.

These findings have implications for legislators, prosecutors, and judges. Ecological thresholds should be incorporated into rules and decisions governing restorative intervention, supported by measurable restoration standards, credible scientific assessment, independent monitoring, enforceable obligations, and meaningful community participation. Decision-makers should require continuing accountability where recovery takes years or pollution effects emerge gradually. Future legal and judicial development should move beyond treating restoration as a procedural consequence of resolving a criminal case. Demonstrable ecological recovery, prevention of further harm, and sustained accountability should instead be substantive criteria for the legitimacy of environmental criminal justice. Only this ecologically grounded approach can ensure that restorative justice responds not merely to offenders and immediate parties, but also to ecosystems, affected communities, and future generations.

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