

Integration of Environmental Approaches In Proving State Losses in Cases Of Corruption Criminal Acts

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Abstract: This study aims to examine the integration of an environmental approach into the evidence on corruption. Environmental corruption is a triggering factor that affects environmental conditions and natural resources, resulting in environmental losses. Law enforcement against corruption in Indonesia does not specifically account for environmental losses. Abuse of authority in these sectors results in widespread environmental damage and significant socio-economic impacts. State financial losses and state economic losses can be interpreted not only as reductions in value or goods, but also as environmental losses resulting from corruption. This research relies on normative or theoretical approaches that use legislative, conceptual, and case methods. Conceptually, state losses in corruption crimes need to be expanded. Proving environmental losses due to corruption crimes in Indonesia is still equated with state financial losses, as calculated by the State Audit Board based on Constitutional Court Decision Number 25/PUU-XIV/2016, with reference to Regulation of the Minister of Environment Number 7 of 2014, which does not specifically address this. Urgent legal reform is essential to incorporate environmental losses into state losses, strengthen regulations, involve environmental experts, and promote ecological justice and sustainability in law enforcement. This reform will help judges more effectively assess environmental damage and its broader impact on society. This situation demands integrating evidence of environmental loss as a form of state loss. Proof of environmental loss should be presented as part of proving state losses in the broader sense, emphasizing that environmental damage can be demonstrated through scientific data, reports from authorized agencies, and testimony from environmental experts. Loss of environmental function can be demonstrated by real ecological and social impacts, while the obligation to restore the environment imposes a concrete burden on the state. Integrating environmental losses into state losses is achieved by strengthening the law's substance, structure, and culture. This strengthening of substance is achieved by strengthening legal instruments, in this case, the Corruption Law. The provisions of the current Corruption Law, in particular, need to expand the definition of state losses to include environmental losses. This confirms that real environmental damage can constitute an actual loss even if it has not yet been reflected in state financial expenditure. Therefore, research on the contribution to the handling of environmental corruption crimes must be viewed as a specific aspect of the evidence. Consideration of state losses is not only about material but also about the immaterial consequences of the act. Environmental experts, as important partners in law enforcement, must collaborate to ensure the integration of evidence-based approaches to environmental losses. Furthermore, law enforcement officials must internalize the values of ecological justice and sustainability in their enforcement of corruption laws.

Keywords: Criminal, Corruption Crimes, Environmental Approach, Integration, State Losse

Introduction

Corruption is an unlawful act that has widespread impacts on governance, state finances, the use of public resources, and even environmental issues. Corruption can have devastating effects on the environmental sector (Prema & Sundar, 2021), and uncontrolled use and management of natural resources will negatively impact the environment. Corruption is a triggering factor that impacts environmental conditions and natural resources. The World Economic Forum notes that the higher a country's corruption level, the greater the environmental damage and the lower its environmental sustainability (Rustamaji & Santoso, 2020).

The natural resources sector, particularly mining, is often cited as a highly vulnerable breeding ground for corruption. This is understandable, as corruption in the extractive mining sector can occur across nearly every aspect of business operations (Das & Mahalik, 2020). These include granting land use permits and carrying out exploitation activities, paying taxes and royalties or coal production proceeds, non-tax state revenues from export sales, and allocating post-mining reclamation guarantee funds (PUSHEP, 2020). These practices not only rob the state of potential revenue streams, such as royalties and taxes, but also cause ecological damage that requires significant repair costs (Sambodo, Handayani, & Suwadi, 2025). Abuse of authority in these sectors leads to widespread environmental damage and significant socioeconomic impacts (Martinho, 2019). This environmental damage imposes a significant burden on the state, resulting in reduced ecological function, increased environmental restoration costs, and the loss of potential benefits from natural resources (Poe, 1999).

A study by Wen et al. examined the impact of corruption on environmental policy across countries and found that corruption does hinder the development of effective environmental policies, but its effects are not uniform across countries (Ali, 2025). Countries with low levels of democracy and lower-middle incomes tend to have weak environmental policy frameworks, so the impact of corruption on green growth is often overshadowed by other structural issues (Wen, Yin, Jang, Uchida, & Chang, 2023). Weak or unstable governments also have fewer incentives to implement strong environmental policies, even when corruption is present (Dincer & Fredriksson, 2018). A closer look at the vulnerability to corruption at every level of natural resource management reveals a distinct social problem (Kolstad & Søreide, 2009). This shift in perspective from legal to social issues encourages public engagement in understanding various forms of corruption to prevent ecological disasters.

Environmental losses have increasingly been recognized as a distinct factor in corruption cases. In the tin mining case, the Public Prosecutor classified environmental losses as a form of state loss (Indriyani, 2022). The actions of Harvey Moeis (the Defendant) and other defendants, as documented in the audit report, resulted in estimated state environmental losses of approximately 271 trillion rupiah. In light of these developments, a re-examination of the concept of state losses in corruption cases is warranted (Maghfiroh & Kholiq, 2025).

Legislation provides several definitions of state losses. Law Number 1 of 2004 concerning State Treasury defines state losses as a real and definite shortage of money, securities, and goods resulting from unlawful acts, whether intentional or negligent (HasudunganSianturi, Simatupang, & Rahmayanti, 2015; Muhammad & Yardi, 2025). Law Number 31 of 1999 concerning the Eradication of Corruption, particularly Articles 2 and 3, stipulates that corruption constitutes an unlawful act that can cause financial losses to the state (Muhammad & Yardi, 2025). This raises the question of whether state losses should be calculated solely as state financial losses or if they encompass broader losses in criminal corruption cases.

The State Treasury Law addresses state losses within an administrative accounting framework, defining such losses as physical, measurable, and quantifiable. In contrast, the Corruption Crime Law treats state losses as an element of a criminal offense, requiring the presence of criminal elements. Consequently, the focus extends beyond actual losses to include risks and potential losses resulting from acts of corruption. This distinction was further clarified in Constitutional Court Decision Number 25/PUU-XIV/2016, which essentially ruled: "Declares that the word 'can' in Article 2 paragraph (1) and Article 3 of Law Number 31 of 1999 concerning the Eradication of Criminal Acts of Corruption as amended by Law Number 20 of 2001 concerning Amendments to Law Number 31 of 1999 concerning the Eradication of Criminal Acts of Corruption (State Gazette of the Republic of Indonesia 2001 Number 134, Supplement to the State Gazette of the Republic of Indonesia Number 4150) is contrary to the 1945 Constitution of the Republic of Indonesia and has no binding legal force (Supiyan, Panjaitan, & Siahaan, 2023)."

This ruling offers an alternative interpretation of the crime concept, particularly concerning state losses, which are characterized as a material offense necessitating demonstrable state losses. This interpretation raises critical questions about the methods used to determine or quantify such losses. A more progressive and ecologically just legal framework is required to ensure that acts of corruption affecting the environment are evaluated not solely in terms of financial

losses to the state (Jiwanti & Mona Ervita, 2025), but also in terms of the restoration of damaged ecosystems. This can be achieved by expanding the definition of state financial losses to encompass ecological losses within the calculation.

An integrated environmental approach provides a comprehensive conceptual and methodological framework for addressing environmental corruption crimes. From a conceptual perspective, state losses resulting from corruption should extend beyond direct financial losses to include broader state interests, such as those arising from environmental harm. Methodologically, this necessitates the development of structured legal mechanisms for conducting loss calculations and determining the appropriate forms of evidence (Agustanti, Waluyo, & Kurniawan, 2023). In this context, an integrated environmental approach addresses existing gaps in legal, conceptual, and methodological domains.

Research Methods

The present study adopts a normative juridical research, conceptualizing law as a system of norms grounded in principles, rules, and doctrine. The focus of analysis is the system of norms that provides prescriptive justification for legal events, positioning this inquiry at the center of the research. The methodology incorporates statutory, case, and conceptual approaches. The statutory approach examines legal regulations on environmental law and corruption (S., 2025), particularly in relation to proving state financial losses. The case approach assesses the application of these regulations in environmental corruption cases. The conceptual approach analyzes the relevant doctrines and principles that inform these legal issues.

Both primary and secondary legal sources are utilized in this study. Primary sources comprise Law No. 20 of 2001 amending Law No. 31 of 1999 on the Eradication of Corruption, Law No. 32 of 2009 on Environmental Protection and Management, Law No. 1 of 2004 on the State Treasury, Constitutional Court Decision No. 25/PUU-XIV/2016, and Supreme Court Decision No. 1277 PK/Pid.Sus/2024. Secondary sources include books and scientific journals that address the evidence for state losses resulting from environmental corruption. These sources are essential for providing a comprehensive overview and justification for integrating environmental losses into the calculation of state financial losses from corruption. To maintain objectivity, the selection process involves identifying and retaining only those regulations and literature directly relevant to the case, while excluding irrelevant materials. The analysis employs systematic interpretive legal reasoning to thoroughly examine the applicable laws and principles, thereby supporting the research justification (Turchyn & Turchyn-Kukarina, 2022)..

Results and Discussion

Legal Framework for Establishing Environmental Losses as State Losses in Contemporary Corruption Cases.

1. Defining State Losses in the Context of Corruption Offenses

State losses refer to reductions in state assets resulting from unlawful acts, negligence, or errors by specific parties, whether intentional or unintentional, that negatively affect the state's or region's finances or assets (Easter, Ramadhana, & Anandya, 2022). The Corruption Crime Law recognizes only state financial losses and establishes distinct regulations for losses arising from corruption-related offenses. Articles 2 and 3 of the Corruption Crime Law provide the legal basis for identifying unlawful acts that harm the state. These articles specify that individuals who engage in unlawful activities to benefit themselves or others, thereby causing losses to state finances or the economy, are committing acts of criminal corruption.

Articles 2 and 3 of the Corruption Crime Law specify that losses resulting from corruption refer to losses to state finances (Kusworo & Anggraini, 2025). According to the General Explanation of the Corruption Crime Law, state finances encompass all assets owned by the state, regardless of whether these assets are consolidated. This definition includes all components of state assets, as well as the rights and obligations associated with them. It also entails the responsibility for supervising and ensuring the accountability of officials in state institutions at both central and regional levels, and overseeing the governance, administration, and supervision of state-owned and regional companies, foundations, legal entities, and firms that involve state or third-party investment in accordance with contractual agreements with the state.

The elements specified in this regulation are identified as objects of criminal acts under Articles 2 and 3 of the Corruption Eradication Law. In this context, the principal object concerns state finances or issues that substantially affect the national economy. State financial losses are not specifically defined in the Corruption Law (Erlangga, Monita, Bobyanto, & Sariono, 2024). However, the explanation of Article 32, paragraph 1 of the Corruption Law provides some clarification. Actual state losses, as defined by law, can be measured by an authorized institution or

appointed public accountant. This concept provides clarity on the legal interpretation of state financial losses within the framework of corruption crimes (Rahmadi, Karjoko, & Hartiwingsih, 2024).

The Corruption Law adopts a broader definition of state losses than the State Treasury Law. The latter defines state losses as a real and definite shortage of money, securities, or goods resulting from unlawful acts, whether intentional or negligent. While state financial losses are encompassed within state losses, they are not explicitly included in this definition. In contrast, the Corruption Crimes Law, particularly Articles 2 and 3, extends the definition to include any actions that harm state finances or the national economy (Riyantika, 2023).

The Central Jakarta Corruption Court decision offers a broader interpretation of state financial losses, distinguishing between state losses and state financial losses. The judgment states that state losses encompass a wider scope than state financial losses, with the latter forming an inseparable part of the former. Consequently, state losses encompass both financial and economic losses, and the two terms should not be treated as equivalent. The general explanation of the Corruption Eradication Law clarifies that "harming state finances or the state economy" refers to causing a loss or reduction in state finances. Thus, harming state finances equates to a loss or reduction of state finances. Furthermore, Article 1, number 22 of Law Number 1 of 2004 concerning State Treasury defines State/Regional Losses as: a reduction in money, securities, or state property that is real and certain in amount; resulting from actions that are unlawful or violate the law; and committed either intentionally or negligently (Thafer, 2023).

The judge's considerations clarify that state financial or economic losses, while components of overall state losses, are not synonymous. State financial and economic losses encompass a broader scope. In their decision, the panel of judges further interpreted the loss of state profits as a form of state financial loss, stating (Wasahua, Istislam, Madjid, & Widagdo, 2022): "The amount of Rp194,718,181,818.19 (one hundred ninety-four billion seven hundred eighteen million one hundred eighty-one thousand eight hundred eighteen rupiah point nineteen cents) should be part of the profits that should have been obtained by PT PPI (Persero). Considering, that by referring to the Criminal Chamber Formulation Results, Number 3 of the Supreme Court Circular Letter No. 2 of 2024 Concerning the Enforcement of the Formulation Results of the 2024 Supreme Court Chamber Plenary Meeting as Guidelines for the Implementation of Duties for the Court, the Panel of Judges concludes that the wealth obtained through unlawful acts has resulted in state financial losses, in this case PT PPI." Therefore, state financial and economic losses may be interpreted not only as a reduction in value or assets but also as the loss of profits rightfully belonging to the state (Tsiatkovska, 2023).

State financial or economic losses resulting from criminal acts of corruption may be broadly interpreted to encompass both potential losses and lost profits. In contrast, the State Treasury Law defines state losses as a real and definite shortage of money, securities, or goods. The broader concept of state financial or economic losses complements the definition of state losses as set out in the State Treasury Law.

2. Establishing Environmental Losses as a Component of State Losses: Evidentiary Approaches

State losses may arise from violations of law or negligence by state officials (Rahmayanti & Pohan, 2022). According to Article 10 of Law Number 15 of 2006 concerning the State Audit Agency, the State Audit Board is authorized to assess or determine such losses. The State Audit Agency Law defines losses as real and definite shortages of money, securities, or goods resulting from unlawful acts, whether intentional or negligent. This definition aligns with the definition of state losses provided in the State Treasury Law.

Supreme Court Circular Letter Number 4 of 2016, which addresses the Implementation of the Results of the 2016 Supreme Court Plenary Session as Guidelines for the Implementation of the Court's Duties, underscores that the authority to declare state financial losses is vested exclusively in the State Audit Board, which holds constitutional authority. Other agencies, including the Financial and Development Supervisory Agency, Inspectorate, and Regional Work Units, may examine and audit state financial management but lack the authority to declare state losses (Tesa, 2025).

According to Constitutional Court Decision 25/PUU-XIV/2016, the calculation and assessment of state losses resulting from corruption must rely on factual calculations to satisfy the elements of corruption outlined in Articles 2 and 3 of the Corruption Law. Consequently, only actual, not potential, losses are recognized in this context. Corruption that results in environmental damage presents significant challenges in establishing the existence of such losses. The evidentiary standard for proving state financial losses requires material evidence or actual calculations. Under Law No. 32 of 2009 concerning Environmental Protection and Management, environmental losses are defined as losses arising from pollution or damage to the environment that does not constitute private property. This definition is applicable to civil environmental loss claims and does not yet address environmental losses resulting from criminal acts of corruption (Chaidir, Muhibbin, & Arief, 2024).

In the Surya Darmadi case, the state's economic losses resulting from forest land conversion could not be comprehensively audited by the Supreme Audit Agency or the Financial and Development Supervisory Agency because most of the losses were ecological and potential (such as lost tax revenue and impacts on the regional economy). As a result, calculations were inconsistent, making it difficult for judges to assess with certainty whether the criteria for state economic loss were met. The absence of an institution with explicit legal authority to audit state economic losses represents a significant external barrier to proving corruption. This highlights the need to establish a national economic audit institution or standard to promote legal certainty, consistent evidentiary standards, and substantive justice in corruption cases with significant economic consequences (Munawwar Hamidi, Ida Keumala Jeumpa, & Sri Walny Rahayu, 2025).

This context presents a legal challenge that necessitates a progressive approach. In addressing corruption cases, applying elements of the state's economic system to determine penalties and to hold corporations accountable as perpetrators constitutes a more advanced strategy (Syarifudin, Azis, & Rahmaddani, 2024). Such an approach seeks to compensate for state losses by considering the wide-ranging economic, social, and ecological impacts of corruption.

The Extraordinary Crime Theory posits that corruption constitutes a crime with extensive and profound effects on a nation's social, economic, and political spheres. Corruption erodes public trust in government institutions and the legal system, resulting in substantial economic losses (Hopkin, 1997). Therefore, corruption should not be classified as an ordinary crime; rather, it necessitates extraordinary interventions and a more rigorous legal framework. Furthermore, the Economic Theory of Crime asserts that financial or accounting assessments are insufficient to fully account for the losses resulting from acts of corruption.

This theoretical perspective underscores the need to account for broader consequences, including diminished state revenues, reduced investment value, infrastructure deterioration, and threats to economic stability. Such an approach offers a more holistic understanding of the losses incurred by the state due to corruption, thereby enabling law enforcement to address them more effectively (FIRSOV, 2024). The Ecological Loss Theory further underscores the enduring environmental consequences of corruption. Although these ecological losses may not be immediately apparent, they can lead to significant consequences, including environmental degradation, natural disasters, and the depletion of natural resources. This theory highlights the need to incorporate ecological considerations into assessments of the total impact of corruption (A. Williams & Dupuy, 2017). "Considering that by continuing to adhere to the meaning of the word detrimental which has the same meaning as becoming a loss or becoming reduced, then what is meant by the element of being detrimental to the state economy has the same meaning as the state economy becoming a loss or the state economy becoming less efficient.

The Panel of Judges classified environmental economic losses as state financial losses, citing the Supreme Audit Agency audit report. The report identified state financial losses totaling Rp300,003,263,938,131.14, with Rp271 trillion attributed specifically to environmental damage. Minister of Environment Regulation Number 7 of 2014 governs the technical calculation of environmental losses resulting from pollution and environmental damage. This regulation defines the scope of environmental losses and designates the responsible parties for their calculation. However, it does not serve as a definitive guideline for calculating environmental losses in corruption cases, as it was not intended for this purpose. Consequently, a legal revision is necessary to address the calculation of environmental losses, taking into account the authority of the institution responsible for determining state losses

Integration of Proof of Environmental Losses as a Form of State Losses in Future Corruption Cases

1. Environmental Perspectives on Corruption Offenses Affecting the Environment

Corruption facilitates environmental crimes (D. A. Williams, 2024), which are especially prevalent in regions with high corruption and limited production capacity (Bergen & Knight, 2015). Such corrupt practices adversely affect the environment, causing significant damage and losses. In the natural resources sector, the environmental losses associated with corruption are extensive and produce long-term consequences. These include the depletion of natural resources, water and air pollution, and broader environmental degradation. Collectively, these outcomes pose substantial risks to human survival in both the present and the future (Wahyu, Sri Afriani, & Eni Jaya, 2024).

Extractive industries, including mining, oil and gas, and forestry, make substantial contributions to national economies. The high economic value of these resources generates considerable opportunities for corruption, such as through resource lending. Industrial-scale extractive activities, as opposed to artisanal operations, are particularly concentrated in terms of concession value and are therefore more susceptible to large-scale corruption (Tacconi & Williams, 2020).

The approach to addressing these challenges consists of several stages. The initial stage involves exploring and identifying opportunities and challenges, and validating key concepts and pillars to advance green growth. This study seeks to enhance understanding of the foundational principles of green economic theory, which are subsequently refined to support green growth. The next stage focuses on testing and developing concepts that address the challenges of green growth initiatives in both developing and developed countries. These objectives and anticipated benefits represent significant contributions of this article and serve as a feasibility assessment for future research (Azwardi, Zainal, & Igamo, 2025).

The extractive industry's vulnerability to corruption indicates a potential for environmental damage. From an ecological perspective, corruption-related losses will affect society and harm the national economy. It requires a broader legal perspective in law enforcement, particularly in proving the element of state loss. State losses cannot be assessed solely from accounting records; they must also provide benefits to the community, which in this case has been harmed by environmental damage.

Environmental losses can be legally positioned as an integral part of state losses, given the state's constitutional obligation to manage the environment and natural resources to the maximum extent possible for the welfare of the people (Sahli & Rejeb, 2015). Corruption significantly exacerbates environmental degradation by facilitating illegal land use and encouraging unsustainable deforestation. Addressing this issue requires applying progressive law. Progressive law understands justice as a law that truly considers new legal sources to achieve it. The fundamental premise that current legal studies have reached an ecological level is essential to anthropocentric thinking (Daryokoa & Pangestikab, 2024).

Progressive law enforcement always reflects the values of justice in society and is not limited to legal formalism. Characteristics of progressive law include its goal of creating a happy society, punishments that promote peace, consideration of the context behind the legal text, and the use of conscience in its enforcement (Haryadi, Ibrahim, & Darwance, 2023). This ensures that law enforcement against corruption does not become bogged down in mere formalism but instead recognizes the environment as a subject that must be protected by defining environmental losses as financial or economic losses to the state.

2. The Concept of Proving Environmental Losses as a Form of State Losses

In prosecuting corruption cases, especially in natural resources and environmental sectors, integrating environmental losses is vital. Recognizing this can make the audience feel their expertise is crucial for advancing legal practices (Beaumont, 2022). The PT Timah corruption case involving Harvey Moeus was a breakthrough by law enforcement, including environmental losses as an element of state financial losses. In its ruling, the proof of state losses was based on the Supreme Audit Agency audit report and on calculations of environmental losses under Minister of Environment Regulation No. 7 of 2014 concerning Environmental Losses Due to Pollution and/or Environmental Damage.

Emphasize that Minister of Environment Regulation No. 7 of 2014 addresses environmental loss calculations in disputes, not in criminal cases, underscoring the need for a specialized legal framework. Based on Constitutional Court Decision No. 25/PUU-XIV/2016, the concept of state loss is defined as a material offense that requires the state to be truly real or actual (actual loss). This should inspire confidence in the audience that establishing clear parameters for environmental losses is essential. Currently, there are no specific parameters for calculating environmental losses.

Based on these issues, a relevant evidentiary approach is needed that does not rely on a single institution calculating losses. The Supreme Audit Agency, the institution authorized to calculate state losses, plays a crucial role. Documents issued by the Supreme Audit Agency serve as crucial evidence of material losses. Therefore, several approaches are necessary in calculating environmental losses. Therefore, proving environmental losses as actual losses is carried out conceptually and applicatively through three leading indicators: (1) the existence of factual and scientifically proven environmental damage; (2) the loss or decline of environmental functions for the public interest; and (3) the emergence of a state obligation to restore the environment.

The fact of environmental damage can be proven through scientific data, reports from authorized agencies, and testimony from environmental experts. Real ecological and social impacts can demonstrate the loss of environmental functions, while the obligation to restore the environment imposes a concrete burden on the state. Therefore, proving environmental losses in corruption cases demonstrates that the element of state loss is not met, as environmental losses cannot be objectively proven, thereby resulting in legal consequences in the form of the state's obligation to restore the environment. This evidentiary approach views environmental losses as part of state losses in a broad sense, without violating the principle of material offenses as affirmed by the Constitutional Court Number 25/PUU-XIV/2016.

3 Integration of Proof of Environmental Losses as a Form of State Losses in Future Corruption Cases

Corruption is a crime that undermines government finances and the economy, impeding growth and the sustainability of national development. Addressing this issue requires highly efficient governance. Widespread and systematic corruption infringes upon the social and economic rights of citizens, elevating it from an ordinary crime to an exceptional one. Consequently, comprehensive law enforcement measures are essential. In Indonesia (Christianto, 2021), corruption remains pervasive, affecting both central and regional governments. The escalation of corrupt practices has become a significant challenge for law enforcement agencies.

The process of proving environmental losses resulting from corruption in Indonesia lacks a clear legal framework for the admissibility of material evidence. At present, such proof relies on the Corruption Crime Law (Law Number 15 of 2006 concerning the State Audit Agency) and the Ministerial Regulation on the Environment. However, the provisions for calculating losses in the Ministerial Regulation do not specifically address environmental losses attributable to corruption. This context necessitates an integrated approach to establishing environmental losses as a component of state loss. Evidence of environmental losses should be incorporated into the broader framework of state loss, emphasizing the occurrence of actual environmental damage, the loss of the environment's function as a public asset, and the state's resulting obligation to undertake restoration.

Reformulating the method for proving environmental losses is essential. Currently, the Corruption Eradication Law does not explicitly recognize environmental losses as state losses. In contrast, Law Number 15 of 2006 concerning the State Audit Board and Regulation of the Minister of Environment Number 7 of 2014 address the calculation of losses solely within the context of environmental administration or disputes, rather than in criminal corruption cases.

Integrating environmental losses into the definition of state losses is imperative. This integration requires strengthening the substance, structure, and culture of the law. Substantive improvement involves amending legal instruments, particularly the Corruption Crime Law, to broaden the definition of state losses to encompass environmental losses. Such an amendment would clarify that actual environmental damage constitutes a real loss, even if it has not yet resulted in direct state financial expenditures. Additionally, the State Audit Board has issued regulations specifically addressing environmental losses as state financial losses. The promulgation of these regulations is essential to address the legal gap concerning the calculation of state losses.

The legal structure encompasses prosecutors, the Supreme Audit Agency, and judges, each playing a critical role in law enforcement. Effective integration of environmental experts is necessary to expand state auditors' roles beyond mere calculation of environmental losses. These experts will serve as key partners for the Supreme Audit Agency in assessing environmental losses. Moreover, judges should adopt a more proactive approach in substantively evaluating state losses, considering both the evidence of environmental damage and its broader impact on the public interest.

Implementing the integrated paradigm that recognizes environmental losses as a form of state loss requires developing a legal culture that supports this perspective. Law enforcement officials should internalize the principles of ecological justice and sustainability when addressing corruption crimes that negatively impact state finances or the economy.

Conclusions

Evidence of environmental losses resulting from corruption is based on calculations by the Supreme Audit Agency. These calculations follow procedures for establishing material state financial losses as outlined in Constitutional Court Decision No. 25/PUU-XIV/2016. Additionally, the calculation of environmental losses is based on the Minister of Environment Regulation No. 7 of 2014, although this regulation does not specifically address losses arising from corruption. The current approach to assessing environmental losses in corruption cases is primarily guided by Law No. 20 of 2001, which amends Law No. 31 of 1999 on the Eradication of Criminal Acts of Corruption, and Law No. 1 of 2004 on the State Treasury. As a result, the methodology for calculating environmental losses, such as those associated with forest land conversion in the Surya Darmadi case (Supreme Court Decision No. 1277 PK/Pid.Sus/2024), remains ambiguous.

Integrating environmental losses into state-loss calculations is essential to ensure their relevance in corruption cases involving environmental damage. This integration requires enhancing legal instruments, particularly the Corruption Crime Law and the Supreme Audit Agency Regulations, to specifically address environmental losses resulting from corruption. Effective law enforcement and the presentation of evidence regarding environmental losses also depend on the involvement of environmental experts. Recognizing environmental losses in corruption cases as tangible losses is vital for safeguarding national development and public welfare.

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