

**Judge's Reasoning in Determining Environmental Restoration Losses in
Unlawful Acts in Forest Fire Cases (Examination of Decision Number
108/Pdt.G/2015/PN.Jkt.Utr.)**

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Abstract

Forest and land fires in Indonesia have become a persistent and complex legal issue, particularly concerning the determination of environmental losses and the effectiveness of compensation mechanisms for restoration. This article examines the legal reasoning employed by judges in determining environmental restoration losses in civil cases concerning forest fires. The main issues addressed in this research are the basis of judicial reasoning in establishing the value of environmental damages and the extent to which environmental restoration methods can be recognized as a form of legal compensation. The objective of this study is to evaluate and critique the legal logic and approaches adopted by judges in case number 108/Pdt.G/2015/PN.Jkt.Utr., as well as to formulate future standards for assessing environmental losses. This research utilizes a normative juridical method with both case and conceptual approaches. Data were collected through literature review and legal documents, and subsequently analyzed qualitatively. The findings indicate that judges still face challenges in determining the value of environmental losses due to the absence of established ecological valuation standards. This research contributes to strengthening the paradigm of restoration-based environmental law and encourages the development of more comprehensive ecological valuation methods.

I. Introduction

Forest fires have become a recurring phenomenon in Indonesia, resulting in widespread ecological, social, and economic impacts. (Hamdani et al., 2024). Legal issues arising from forest fires in Indonesia are not limited to criminal aspects; they also encompass civil aspects in the form of lawsuits for unlawful acts. A crucial aspect of such lawsuits is the determination of environmental damage and efforts for its restoration. Each year, the dry season, coupled with illegal land clearing through burning, creates transboundary air pollution, destroys biodiversity, disrupts public health, and devastates the ecological functions of tropical forests. According to KLHK data from 2022 covering the period 2015-2021, over 2 million hectares of land were burned, resulting in economic losses reaching tens of trillions of rupiah and ecological degradation that is difficult to restore. (Liyantono et al., 2023).

Globally, the impact of Indonesian forest fires is a major concern due to their significant contribution to carbon emissions, exceeding those of the industrial sectors in some developed countries. ((Syafii et al., 2025)). This not only involves violations of national regulations but also reflects the inconsistency between Indonesia's commitment to climate change mitigation and on-the-ground practices. The damage to peat ecosystems, the loss of ecosystem services, and the harm to local communities are complex aspects demanding adequate legal accountability.

The problems arising from forest and land fires (karhutla) are not only criminal—the prosecution of those responsible for the burning—but also civil, involving lawsuits for unlawful acts (*onrechtmatige daad*) demanding compensation and environmental restoration. These civil lawsuits are important because, in addition to punishing perpetrators, they aim to restore the environment damaged by the fires. A crucial aspect of such lawsuits is the method of determining the value of environmental damage and establishing appropriate forms of restoration legally recognized.

Indonesia possesses relatively strong legal frameworks. Article 88 of Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH) incorporates the principle of strict liability, meaning absolute responsibility without the need to prove the perpetrator's fault. This principle aims to expedite environmental litigation and protect the ecological interests and affected communities (Wongkar, 2024). In the context of international environmental law, this principle aligns with the polluter pays principle, the precautionary principle, and restorative environmental justice. However, in

judicial practice, a gap exists between existing legal norms and their juridical implementation. This encompasses at least three main aspects: (1) inconsistent understanding among judges of the concept of strict liability, (2) the lack of nationally recognized standards for valuing environmental damage, and (3) a weak system for overseeing the implementation of environmental restoration ordered in court judgments. Further research is needed (Wongkar (2024) Research reveals that in adjudication practice, the application of strict liability is still overshadowed by the classical understanding of unlawful acts, which requires proof of fault. Judges often combine elements of negligence and liability without fault, leading to ambiguity in the application of the principle. This is exacerbated by the lack of a clear classification between strict and absolute liability, even though the two have different conceptual and juridical characteristics. (Wongkar, 2024).

The North Jakarta District Court Decision No. 108/Pdt.G/2015/PN.Jkt.Utr. represents a progressive example of applying strict liability in environmental lawsuits. The court ordered PT. Jatim Jaya Perkasa to pay compensation and restore land damaged by a fire on its concession. While proof of fault wasn't required, the decision was weak in detailing the methodology for assessing ecological damage. The method used to determine the compensation amount—whether Contingent Valuation Method (CVM), replacement cost, or other ecosystem valuation methods—wasn't clearly explained.

Existing economic valuation methods often fail to capture the complex ecological value, resulting in compensation that doesn't reflect the actual loss. This creates legal uncertainty and reduces the effectiveness of environmental protection through civil mechanisms. Therefore, more comprehensive ecological valuation methods and clear assessment standards are needed to make court decisions effective instruments for enforcing restorative environmental law.

The lack of national technical guidelines for measuring environmental damage further complicates the situation. While the Ministry of Environment and Forestry (KLHK) has drafted several valuation guides, these haven't been formally enacted into binding regulations. Consequently, many decisions rely on inconsistent expert opinions, leading to disparities between rulings and legal uncertainty.

Furthermore, legal issues arise from the vagueness of environmental restoration orders. Some rulings contain general restoration orders lacking success indicators, timelines, or oversight mechanisms. This risks rendering restoration orders mere formalities. Further research is needed to address these shortcomings and improve the effectiveness of environmental litigation in

Indonesia Dina noviani (2021) Studies show that without external oversight, many companies fail to fully implement restoration obligations or only comply administratively. (Noviani, 2022).

This inconsistency demonstrates that the principle of strict liability is not yet fully understood within Indonesian environmental court proceedings. Yet, according to the Supreme Court through Circular Letter KMA No. 36/KMA/SK/II/2013, environmental judges are obligated to understand fundamental principles of environmental law, including the reversal of the burden of proof and the application of strict liability in civil cases.(Agung, 2013). While the instructions are normative, they lack sufficient emphasis on judicial training and capacity building. The urgency of improving the environmental accountability system is heightened by the global climate crisis and the demands of sustainable development. Indonesia needs to develop an environmental adjudication system that is not only legally robust but also ecologically relevant and socially just. In other words, ecological justice requires more than just financial compensation; it must also include the functional restoration of damaged ecosystems and the restoration of the rights of affected local communities.

Forest fires can no longer be viewed solely as technical problems or natural disasters. They represent systemic failures in environmental management and law enforcement. The inclusion of strict liability in the UU PPLH is a normative step forward, but insufficient to address the complexity of environmental damage caused by corporate activities. Therefore, comprehensive reform of Indonesia's environmental legal system is necessary, including the development of guidelines for valuing ecological damage and enhancing the academic capacity of judges to reason through environmental issues. Based on this background, the research questions are:

1. How do judges reason legally in determining environmental damage in forest fire cases?
2. How relevant is the ecosystem restoration approach in judicial considerations regarding environmental unlawful acts?

Previous research on environmental damage and restoration has been conducted. For example, Meylan Dama's research published in the JIRK Journal of Innovation Research and Knowledge (2024) examined the effectiveness of applying the "in dubio pro natura" principle and the doctrine of strict liability in Supreme Court cassation decisions related to forest and land fires involving PT Rafi Kamajaya Abadi. Using a normative juridical method with a case study approach, this study found that both principles were well-applied as a basis for environmental protection and enforcing the absolute responsibility of those

who cause environmental damage. However, the research also identified challenges in proving causality and implementing compensation and environmental restoration. Key recommendations include strengthening the capacity of law enforcement institutions, developing more specific technical regulations, and increasing synergy between national policies and international law to strengthen the effectiveness of environmental law enforcement in Indonesia. (Dama, 2024).

Secondly, research by Timothy Christian Randal Karosekali dkk. (2025) Secondly, research addresses the legal issues and methods of valuing ecological damage as an element of state losses in cases of pollution and environmental damage resulting from illegal mining activities in Indonesia. This study explains that the valuation of ecological damage includes assessing the direct and indirect use value of damaged natural resources, as well as environmental restoration costs based on the Minister of Environment and Forestry Regulation No. 7 of 2014. The research emphasizes the importance of involving environmental economic valuation experts in proving ecological damage to ensure accurate and legally defensible loss values. Furthermore, this study recommends the formation of a cross-agency team to conduct integrated assessments of losses to support effective environmental law enforcement (Karosekali & Frans, 2025).

This research offers a novel approach by providing an in-depth examination of court decisions, grounded in the conceptual framework of ecosystem restoration as a form of legal accountability. This study synthesizes legal responsibility doctrines, ecological damage valuation techniques, and an ecologically just restoration approach. Its main contribution is to provide a strong academic foundation for more effective policy formulation and judicial practice in determining environmental damages, and to encourage the development of nationally adopted technical guidelines for the valuation of ecological losses.

2. Research Method

This research employs a normative juridical approach to examine the congruence between positive legal norms and their practical application in environmental law enforcement, particularly concerning unlawful acts resulting from forest fires. This approach provides a strong basis for evaluating the legal foundations used by judges in determining liability and ecological damage. The normative approach focuses on a statute approach, specifically utilizing Law Number 32 of 2009 concerning Environmental Protection and Management, to analyze the principle of strict liability and the inherent environmental restoration principles.

A case approach is also used to conduct an in-depth analysis of Decision Number 108/Pdt.G/2015/PN.Jkt.Utr., the primary case study. This approach analyzes the structure of the decision, arguments of the parties involved, and the legal rationale established by the panel of judges in assessing and issuing the ruling concerning liability for environmental damage. This evaluates the consistency between legal doctrine and its application by law enforcement officials, in this case, the judiciary. Furthermore, a conceptual approach is used to explore relevant theories in environmental law, such as ecological justice theory, ecological compensation theory, and ecosystem-based restoration. This approach allows the researcher to examine not only written rules but also highlight relevant and developing legal thought in responding to the complexities of environmental damage.

Data collection involved compiling a literature review of primary legal sources, including legislation and court decisions, and secondary legal sources such as textbooks, scientific journals, and legal articles. Data was also gathered on environmental documents, including damage reports and land restoration records. Data analysis used a qualitative-prescriptive method, interpreting and examining the normative content and jurisprudence to identify the patterns of legal reasoning used by judges. The researcher compared practice and theory, identifying legal gaps or inconsistencies in the implementation of rules regarding environmental damage and restoration.

3. Results and Discussion

Judge's Legal Reasoning in Determining Environmental Losses in Forest Fire Cases

The Jakarta Northern District Court Decision Number 108/Pdt.G/2015/PN.Jkt.Utr. resulted from a lawsuit filed by the Indonesian Ministry of Environment and Forestry against PT. Jatim Jaya Perkasa, a palm oil plantation company. The plaintiff argued that the defendant committed an unlawful act by allowing a fire to occur on its concession area exceeding one thousand hectares, resulting in ecological damage and transboundary air pollution. The plaintiff demanded material and immaterial compensation and requested the court to order the defendant to conduct environmental restoration. The defendant, PT. Jatim Jaya Perkasa, claimed that the fire was not their fault but a result of the prolonged dry season and actions of the surrounding community. The defendant also argued that it had taken various preventive and mitigation measures and possessed fire-fighting facilities in accordance with applicable regulations. (Pengadilan Negeri Jakarta Utara, 2015).

Common issues in this context include how judges determine the extent of environmental damage, who is responsible, and how those legal considerations reflect environmental principles such as ecological justice and strict liability. In

case 108/Pdt.G/2015/PN.Jkt.Utr., the judge based their considerations on Article 88 of Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH), which states that perpetrators of environmental damage are strictly liable without the need to prove fault.

After the evidentiary process, the panel of judges declared that the defendant was legally and convincingly proven to have committed an unlawful act by failing to control the fire on its concession land. The judge applied the principle of strict liability as stipulated in Article 88 of the UU PPLH, thus eliminating the requirement of proving fault. The judge ruled that the defendant must pay material compensation for environmental restoration and an administrative fine, and ordered the defendant to carry out ecosystem restoration on the burned land. In this decision, the judge referred to the testimony of environmental experts and the results of an environmental audit showing the degradation of ecological functions due to the burning of forests by the defendant company. However, there was no clear methodological explanation of how the ecological damage figures were calculated, even though these figures were used as the basis for determining the amount of compensation.

The judge in this case appears to have taken a teleological approach, assessing a legal norm based on the intended social goals. (Harini & Rahmat, 2025). In the context of environmental law, the goal is to ensure ecosystem restoration and the protection of public natural resources. Therefore, even if the amount of compensation is not based on a transparent scientific methodology, the legal logic used remains oriented towards achieving substantive justice for the damaged environment. The judge's legal reasoning in this case demonstrates the application of the principle of strict liability, where the judge did not require proof of the defendant's fault, but only needed to show that environmental damage occurred in the area under the defendant's control. In this context, the judge interpreted Article 88 of the UU PPLH as a basis for eliminating the element of fault as a condition of liability, thus strengthening the effectiveness of legal protection for the environment. This can be interpreted to mean that any responsible party whose area experiences pollution or environmental damage can still be held legally accountable, even if there is no proof of intent or negligence.

The application of the strict liability principle aims to strengthen environmental protection by deterring businesses from always applying the precautionary principle and good environmental management. This principle also makes it easier for victims or the government to claim compensation and environmental restoration because they are not burdened with the obligation to prove the perpetrator's fault. In judicial practice, as reflected in the North Jakarta District Court Decision Number 108/Pdt.G/2015/PN.Jkt.Utr., the judge only needs to prove the existence of environmental damage in the area of the defendant's responsibility to decide on legal liability. Thus, strict liability is a progressive and effective legal instrument in addressing environmental damage and encouraging businesses to be more responsible for the environmental impact of their activities (Dama, 2024). This is considered progressive because it aims to accelerate environmental restoration and minimize the evidentiary obstacles that have been a hindrance in environmental litigation.

The judge emphasized that the owner or manager of concession land has a legal and moral obligation to ensure that activities on that land do not cause ecological damage, including the risk of forest and land fires. In their considerations, the judge also stated that responsibility for the fire remains with the concession holder, even if the fire occurred due to the negligence of another party or natural factors. This is in line with the precautionary principle doctrine, which requires caution in activities that pose a high risk to the environment. (Nurismawati et al., 2025). In its considerations, the judge also adopted the principle of *in dubio pro natura*. This principle emphasizes that if there is doubt about the impact of an activity on nature, the legal decision must favor the sustainability and safety of the ecosystem. (Arifin & Idris, 2023). This reasoning demonstrates that the judge integrated international environmental law principles into national judicial practice as a manifestation of ecological justice.

From a conceptual approach, there is criticism of the transparency and methodology in determining the amount of compensation. There is no technical explanation of how the ecological damage figures were calculated. Although expert testimony was presented during the trial, the ruling does not detail the environmental valuation methodology, such as replacement cost, market price, or Contingent Valuation Method (CVM), which could be used to strengthen the validity and objectivity of the assessment. Some recommended environmental valuation methods for use in environmental legal cases include: (1) Contingent Valuation Method (CVM), a method that measures the non-market value of ecosystem services based on people's willingness to pay (WTP) or willingness to accept (WTA) compensation. (Wijayanti et al., 2022). (2) Replacement Cost Method, a method of calculating the cost of restoring environmental functions to their original state. (Karyati, 2023). (3) Benefit Transfer Method, a calculation method that uses valuation data from other similar studies to estimate the value of losses in a particular case. (Steybi et al., 2024). The selection of a methodology for valuing ecological damage is crucial to ensure that judges do not rely solely on subjective estimations, but instead refer to scientifically validated approaches. Therefore, while this decision represents progress in environmental law enforcement, updates are still needed in the methodology for assessing ecological damage through the application of measurable and scientifically-based valuation standards.

This discussion recommends strengthening national technical guidelines on the valuation of ecological damage, which judges should use as a reference when issuing rulings. Furthermore, interdisciplinary collaboration between legal experts, environmental economists, and ecologists is needed to enrich legal considerations with objective and measurable scientific approaches.

The Relevance of the Ecosystem Restoration Approach in Judges' Considerations Regarding Environmental Offenses

The general problem in environmental law enforcement is the dominance of a repressive approach that places more emphasis on the aspect of punishment, especially in the form of monetary compensation, compared to concrete restoration measures for damaged ecosystems. (Sinaga et al., 2024). In the context of forest fires, the damage is not only material but also includes the loss of ecological functions, the destruction of biodiversity, and long-term impacts on public health and the climate. Therefore, there is a demand for the legal system to adopt a more progressive and sustainable approach, namely the ecological restoration approach. (Abdul Wahab Podungge et al., 2025).

Unlawful acts in the context of the environment not only cause material and immaterial losses to individuals or corporations, but also cause systemic,

multi-layered and long-term damage to the ecosystem (Saputra & Diantoro, 2024). Therefore, the judge's consideration in deciding environmental cases should not only be oriented towards financial compensation, but also prioritize the principle of ecosystem restoration. This restoration is an inseparable part of ecological justice and environmental sustainability as stated in various principles of international environmental law such as polluter pays, precautionary principle, and restorative environmental justice. (White, 2024).

Ecosystem restoration (ecological restoration) is defined as a systematic effort to return an ecosystem damaged by human activity to its original condition, or at least to a condition that functions ecologically. (Sri Rizkhy Saleh & Atika Puspita Marzaman, 2024). This approach is also reflected in the doctrine of environmental justice, which emphasizes that the resolution of environmental cases must be able to rehabilitate environmental functions, repair socio-ecological losses, and not simply impose financial sanctions. (Lumban Gaol et al., 2025). Environmental justice is only considered achieved when the damage caused has been restored both ecologically and socially.

The ecosystem restoration approach is increasingly considered a more comprehensive alternative in environmental cases, especially forest fires, which cause multidimensional damage, namely physical, biological, social, and climate. Often in civil litigation practices, judges are trapped in a repressive approach by only deciding on compensation in the form of financial compensation. In fact, ecological losses cannot only be restored through money, but require active intervention based on the restoration of environmental functions. The general problem is that the legal system is still weak in internalizing this restoration model into concrete and measurable verdicts. (Dama, 2024).

Indonesia's Law Number 32 of 2009 on Environmental Protection and Management (UU PPLH), Articles 53-54, mandates restoration as part of the legal responsibility of polluters or those causing environmental damage. However, restoration is often not prioritized in court decisions. Most decisions focus on fines or compensation, while the restoration aspect tends to be declarative without mechanisms for oversight, success indicators, or sanctions for non-compliance.

In decision 108/Pdt.G/2015/PN.Jkt.Utr., the panel of judges showed a new direction. In addition to imposing material compensation, the judge also ordered the defendant to undertake restoration at the fire site. This reflects legal recognition that ecological restoration is an integral part of fulfilling environmental justice. It is not only a form of recovery for affected communities

but also a form of responsibility towards environmental rights themselves.

However, from a practical legal standpoint, serious weaknesses remain in the implementation of this restoration. First, the lack of clear quantitative and qualitative indicators in the ruling makes it difficult to evaluate the success of the restoration. Second, it is unclear who is responsible for overseeing the implementation of the restoration: government technical agencies, state attorneys, or independent environmental institutions? Third, there are no clear sanctions if the defendant fails to implement the restoration. This shows that although the idea of restoration is present in legal considerations, the legal and institutional infrastructure is inadequate.

Further conceptual analysis shows that the court has not fully utilized ecosystem-based assessment methodologies in determining the form and objectives of restoration. Within the framework of Ecosystem-based Management (EBM), restoration aims not only to restore physical forms (such as vegetation) but also to revive ecological functions such as water cycles, carbon storage, and species interactions. Studies by Hanson et al. (2013) emphasize that Habitat Equivalency Analysis (HEA) or Environmental Benefit Transfer methods can be used to more accurately measure the loss of environmental services and determine the appropriate restoration value (Hanson et al., 2013).

The ecosystem restoration approach also requires judges to be proactive in determining verifiable forms of remediation. (Isabella & Ravizki, 2024). This necessitates synergy between legal decisions and technical environmental instruments. However, to date, there are no specific regulations from the Supreme Court or the Ministry of Environment and Forestry (KLHK) regulating how ecological restoration should be carried out after a court decision. This gap creates significant opportunities for environmental damage perpetrators to avoid ecosystem restoration as stipulated in the court ruling.

The success of ecosystem restoration is highly dependent on the involvement of local communities, especially indigenous communities who have a direct relationship with the burned forest areas. Several studies have shown that community-based approaches are more sustainable because they prioritize participation, social oversight, and local cultural approaches to restoration. Therefore, judges can also consider court orders that encourage community involvement in restoration planning and implementation as part of the inclusivity principle of ecological justice.

Based on this analysis, it can be concluded that the relevance of the ecosystem restoration approach in judicial considerations is significant in environmental cases because it provides a more just and sustainable corrective

mechanism than mere fines. However, to be effective, this approach must be framed within a clear, measurable, and monitorable legal-technical framework.

The analysis above provides several suggestions for environmental law enforcement agencies: (1) The Supreme Court needs to develop technical regulations regarding the formulation of court decisions based on ecosystem restoration, including outcome indicators and timelines; (2) The Ministry of Environment and Forestry (KLHK), together with the judiciary, needs to develop guidelines for post-decision restoration execution, including audits, periodic reporting, and sanctions for negligence; (3) An independent multi-stakeholder oversight body (government, NGOs, indigenous communities, academics) should be established to monitor the effectiveness of restoration actions; and (4) Training for environmental judges should include technical ecological aspects so that decisions reflect scientific sensitivity to the complexities of environmental damage.

4. Conclusion

Analysis of the forest fire case, 108/Pdt.G/2015/PN.Jkt.Utr., reveals a progressive judicial approach, particularly through the application of strict liability, which bypasses the need for direct proof of fault. This is crucial in environmental cases, affirming that landholders or permit holders are fully responsible for ecological damage within their concessions, regardless of negligence or malicious intent. Strict liability positively impacts environmental protection effectiveness, overcoming evidentiary obstacles that often hinder justice for affected communities and damaged ecosystems. However, the judgment lacks consistent, measurable scientific methodology for assessing ecological damage. While compensation figures are stated, the calculation method (market valuation, replacement cost, Contingent Valuation Method (CVM), etc.) remains unclear. This lack of transparency creates legal uncertainty and potential inconsistency in future rulings.

Conceptually, the decision is progressive in incorporating ecosystem restoration. The court ordered not only monetary compensation but also restorative actions. This reflects ecological justice, acknowledging that environmental damage requires more than financial remedies, demanding concrete steps to restore lost ecological function. However, the effectiveness of the restoration order is hampered by a lack of clear success indicators. The ruling doesn't specify restoration actions, affected area, or timelines. This highlights the need for improved restorative instruments that are monitorable, verifiable, and scientifically and administratively accountable.

This research shows Indonesian judges are adopting more reflective and responsive approaches to environmental complexities, considering ecological

restoration and strengthening accountability. However, systemic updates are needed: standardized guidelines for ecological damage valuation, increased judicial understanding of environmental science, and independent oversight mechanisms for environmental restoration rulings. Recommendations include: (1) The Supreme Court should formulate national guidelines on ecological damage valuation methods for environmental civil cases, ensuring uniformity and accountability; (2) Expanded training for environmental judges should cover ecological valuation methodology and technical aspects of environmental restoration; (3) A monitoring and evaluation system involving technical agencies and civil society should be established to oversee post-decision restoration implementation. This will ensure restoration is not merely symbolic but a truly just and sustainable restorative mechanism for nature and future generations.

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