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Reconstructing Ecological Compensation in Oil Palm Plantation Fire Litigation Based on Islamic Environmental Justice

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Abstract

Environmental compensation in oil palm plantation fire cases remains a contested issue in Indonesian environmental law. Although compensation is necessary to restore ecological damage, its calculation often raises concerns regarding causation, proportionality, and the actual use of compensation for ecological restoration. In several cases, plantation companies may be required to pay substantial environmental damages merely because fire occurred within their concession areas, even when the origin of fire, causal contribution, or corporate negligence remains disputed. This article examines how environmental compensation in oil palm plantation fire litigation should be reconstructed through Islamic legal principles. It employs normative legal research using statutory, case, conceptual, and Islamic jurisprudential approaches. The study analyzes Indonesian environmental regulations, court decisions, and Islamic legal doctrines concerning dhaman, darar, ta'widh, maslahah, and la darar wa la dirar. The findings show that environmental compensation should not be treated solely as a financial sanction or state revenue mechanism. It must be based on proven environmental harm, a legally relevant causal connection, proportional assessment, and a clear restoration purpose. From an Islamic legal perspective, dhaman requires liability to be attached to a party that causes or contributes to harm; darar demands that compensation reflect actual damage; ta'widh directs compensation toward repair; while maslahah ensures that remedies serve public welfare and ecological recovery. The article concludes that a just model of environmental compensation must distinguish polluters from victims, prevent arbitrary liability, and ensure that compensation is transparently used to restore damaged ecological functions.

Keywords: *Environmental compensation; Oil palm fires; Islamic environmental law; Ecological restoration; Proportional liability.*

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Introduction

Land and forest fires in oil palm plantation areas remain one of the most serious environmental law problems in Indonesia. They are not merely ecological incidents, but also social, economic, and legal crises. Ecologically, plantation fires may destroy soil structure, reduce biodiversity, release carbon emissions, damage peatland hydrology, and impair the ability of ecosystems to recover naturally. Socially, smoke haze affects public health, transportation, education, and community livelihoods. Economically, oil palm is a strategic commodity that supports employment, regional income, export revenue, and rural development. Therefore, every fire incident within plantation concessions creates a complex tension between environmental protection, economic continuity, and legal accountability.

The recurring nature of forest and land fires can be seen from the burned-area data between 2015 and 2019. In this period, millions of hectares of forest and land areas were burned in Indonesia, with the most severe damage occurring in 2015 and 2019, both of which were associated with El Niño conditions and prolonged dry seasons. Scientific studies have shown that Indonesian fire activity is highly sensitive to El Niño-induced drought, particularly when dry conditions coincide with degraded peatlands and land-use pressures (Pan et al., 2018). According to data from the Ministry of Environment and Forestry, the burned area reached 2,611,411 hectares in 2015, declined to 438,363 hectares in 2016, 165,484 hectares in 2017, and increased again to 510,564 hectares in 2018. As of September 2019, forest and land fires had affected 857,755 hectares, reflecting the renewed escalation of fire events during another dry period.

Indonesian environmental law has responded to these fires through several instruments, including civil liability, strict liability, environmental restoration, and compensation for ecological damage. In plantation fire litigation, compensation is intended to ensure that environmental damage is not left without remedy. It may cover ecological loss, restoration costs, public health impacts, and the loss of environmental functions. Purwanto, Sjarief, and Saleh show that forest fire litigation in Indonesia has increasingly become a mechanism to establish environmental accountability and impose compensation for ecological loss (Purwanto et al., 2024). However, compensation in this field is not a simple matter of calculating the number of burned hectares and multiplying it by a monetary formula. It requires a careful legal and scientific inquiry into the cause of fire, the scale of ecological damage, the defendant's contribution, and the use of compensation for actual environmental recovery.

This is where the main problem arises. In several plantation fire cases, environmental compensation may be claimed or imposed in very large amounts because fire occurred within a concession area. Yet the origin of the fire, the causal contribution of the defendant, the degree of negligence, and the actual capacity to prevent or control the fire are not always examined with sufficient rigor. Astuti and Fatimah demonstrate that expert knowledge plays a decisive role in plantation fire litigation because scientific testimony is used to construct causation, territorial

responsibility, and the socio-ecological consequences of fire (Astuti & Fatimah, 2024). This shows that compensation depends not only on the existence of environmental damage, but also on how courts assess evidence, interpret expert valuation, and connect ecological harm to legally attributable conduct.

The problem becomes more serious when strict liability is understood as eliminating the need to examine causation and proportionality. Strict liability is important because it reduces the evidentiary burden in cases involving serious environmental harm. Rachma and Triwibowo also explain that strict liability has become an important doctrine in Indonesian environmental law enforcement because it reduces the burden of proving fault in cases involving serious environmental risks (Rachma & Triwibowo, 2023). Nevertheless, strict liability should not be treated as automatic liability. It may reduce the need to prove fault, but it should not erase the need to establish environmental damage, causal connection, risk control, and proportional liability.

Environmental compensation also raises a second problem, the gap between monetary awards and ecological restoration. Large compensation claims are often justified as necessary to restore damaged ecosystems and deter future violations. However, a large award does not automatically restore soil, water systems, vegetation, biodiversity, carbon functions, or public health. Putri, Sukarsa, and Imamulhadi argue that court decisions on environmental compensation do not automatically guarantee ecological recovery, especially when compensation is paid as money without a clear restoration mechanism (Putri et al., 2023). These studies are useful because they show that compensation must be connected to restoration, not merely to payment.

Previous scholarship has also begun to integrate Islamic law with environmental governance. Triana and Izza analyze the Polluter Pays Principle from an Islamic legal perspective and argue that Islamic law supports responsibility for environmental harm and the imposition of obligations on polluters (Triana & Izza, 2021). Salman and Asmanto show that Islamic environmental stewardship can be developed from hadith and legal frameworks of ecological responsibility (Salman & Asmanto, 2024). Susana and others further explain that maqasid-based environmental governance can provide a normative foundation for protecting natural resources through public welfare, justice, and prevention of harm (Susana et al., 2025). These studies are valuable, but they do not specifically reconstruct ecological compensation in oil palm plantation fire litigation through Islamic civil liability doctrines.

This article fills that gap by developing a causation-sensitive, proportional, and restoration-oriented model of ecological compensation based on Islamic environmental justice. The article argues that ecological compensation should not be understood merely as monetary liability, but as a restorative legal obligation grounded in proven harm, legally relevant causation, proportional assessment, and public interest. In Islamic law, *dhaman* requires responsibility for damage, but such responsibility must be linked to *darar* and causal attribution. *Ta'widh* directs

compensation toward repair and restoration, not merely payment. *La darar wa la dirar* prevents both ecological harm and unjust legal burden, while *maslahah* requires remedies to serve public welfare, ecological recovery, and intergenerational justice. Through this framework, Islamic law can strengthen environmental compensation by ensuring that it is not only punitive, but also restorative and substantively just.

Based on the background and doctrinal gaps described above, this study focuses on two primary legal problems. First, what are the problems surrounding the determination of causation, proportional liability, and the utilization of ecological compensation in the judicial practice of oil palm plantation fire litigation in Indonesia? Second, how can a model of ecological compensation based on Islamic environmental justice be reconstructed through the integration of the doctrines of *dhaman*, *darar*, *ta'widh*, *la darar wa la dirar*, and *maslahah* to ensure equitable environmental restoration? This article contributes by developing a causation-sensitive and restoration-oriented model of ecological compensation that integrates Indonesian environmental law with Islamic doctrines of liability, harm, compensation, public interest, and prevention of injustice.

Methods

This study employs normative legal research methods utilizing statute, case, conceptual, and Islamic legal approaches. The statute approach is used to examine legal norms governing civil liability, environmental compensation, ecological restoration, and guidelines for the valuation of environmental damages, particularly the Law Number 32 of 2009 on Environmental Protection and Management and the Regulation of the Minister of Environment Number 7 of 2014. The case approach is employed to analyze the legal reasoning (*ratio decidendi*) in court decisions concerning forest and land fire cases, specifically in evaluating the basis of liability, the evidentiary standards of causal relations, methods of calculating damages, and the nexus between compensation orders and actual ecological restoration. The conceptual approach is applied to examine the doctrines of strict liability, the polluter pays principle, ecological restoration, causation, and proportional liability within modern environmental law.

The Islamic legal approach is utilized to reconstruct environmental compensation through the doctrines of *dhaman* (liability), *darar* (harm/damage), *ta'widh* (remedy/compensation), *maslahah* (public interest/welfare), and *maqasid al-shariah* (the overarching objectives of Islamic law). The legal materials comprise primary legal materials consisting of statutory regulations and court rulings; secondary legal materials in the form of relevant books, journal articles, and empirical research reports; as well as tertiary legal materials, including legal dictionaries and Islamic legal encyclopedias. All legal materials are analyzed using a qualitative-prescriptive method by interpreting legal norms, evaluating the consistency of their judicial application, and testing the relevance of Islamic jurisprudence doctrines to the contemporary dilemmas of ecological compensation.

Results and Discussion

Problems of Causation, Proportional Liability, and Restoration in Oil Palm Plantation Fire Litigation

Environmental compensation in oil palm plantation fire cases must be understood as more than a monetary response to burned land. It is a legal mechanism intended to address ecological degradation, social loss, public health impacts, and the restoration of damaged environmental functions. Oil palm plantation fires may produce layered forms of environmental damage: destruction of soil structure, loss of organic matter and nutrients, disruption of hydrological functions, air pollution, greenhouse gas emissions, biodiversity loss, public health disturbance, and reduction of long-term ecosystem resilience.

Scientific literature shows that oil palm expansion and peatland degradation in Indonesia are closely connected with ecological stress, particularly where plantations are developed in or near peat ecosystems. Abdurrahim and colleagues, for example, show that the rapid conversion of peatlands to oil palm plantations, combined with fires, has caused severe ecological degradation and health-threatening haze in West Kalimantan (Abdurrahim et al., 2025). This confirms that plantation fires are not isolated accidents, but events located within a broader political ecology of land conversion, water management, corporate access, and regulatory enforcement.

The nature of environmental damage in oil palm plantation fires is complex because fire changes the physical, chemical, and biological characteristics of the affected land. When peat or mineral soil burns, the damage is not limited to the visible loss of vegetation. Fire can reduce soil organic carbon, destroy microbial communities, alter nutrient cycling, increase soil bulk density, and impair the capacity of land to retain water. When fire burns plantation areas, especially on drained peatlands, those soil functions may be damaged or lost.

Air pollution and carbon emissions form another major dimension of environmental damage. Dhandapani and Evers demonstrate that oil palm slash-and-burn practice on tropical peatland increases post-fire greenhouse gas emissions and nutrient concentrations in burned regions (Dhandapani & Evers, 2020). Hein and others also show that Indonesian peatland fires significantly increase PM2.5 exposure, causing severe public health impacts, including premature mortality, respiratory hospital admissions, severe asthma attacks in children, and lost workdays (Hein et al., 2022). This means that environmental compensation cannot be confined to the internal boundaries of a plantation concession. Smoke and particulate pollution travel beyond property lines, affecting surrounding communities and even neighboring countries. Therefore, compensation in plantation fire cases must recognize both site-specific ecological damage and transboundary or diffuse environmental harm.

Biodiversity loss is also central. Plantation fires can destroy habitat, reduce species richness, and weaken ecological networks. Oil palm landscapes already have lower biodiversity than natural forests, and fire further reduces habitat complexity. Dhandapani, Yule, and Drewer

note that Southeast Asian tropical forests and peat swamp forests are biodiversity-rich and carbon-rich ecosystems, while oil palm expansion is associated with deforestation, greenhouse gas emissions, and biodiversity loss (Dhandapani et al., 2024). In compensation cases, biodiversity damage is often monetized through standardized formulas. However, biodiversity is difficult to fully translate into money because it includes genetic resources, ecological interactions, habitat continuity, and future ecological functions. This creates a tension between the need to calculate compensation and the impossibility of perfectly valuing ecological loss.

In Indonesian law, the legal basis for environmental compensation is primarily found in Law No. 32 of 2009 concerning Environmental Protection and Management, as amended by the Job Creation framework. Article 87 establishes liability for parties whose unlawful acts cause pollution or environmental damage, including the obligation to pay compensation and/or take certain actions. Article 88 recognizes strict liability for certain hazardous or serious environmental activities, while Article 90 grants the government and regional governments standing to file claims for compensation and certain actions against business activities that cause environmental pollution or damage. Article 91 further recognizes community standing in environmental disputes. These provisions show that environmental compensation is not merely a private law remedy but a public law instrument aimed at protecting environmental interests.

The technical basis for calculating environmental loss is provided by Minister of Environment Regulation No. 7 of 2014 on Environmental Losses Due to Pollution and/or Environmental Damage. This regulation classifies environmental losses into several categories, including losses due to exceeding environmental quality standards, costs of environmental dispute settlement, costs of pollution control and/or environmental restoration, and ecosystem losses. In practice, these categories allow experts and courts to calculate losses based on components such as water storage, water regulation, erosion control, soil formation, nutrient recycling, waste decomposition, biodiversity, genetic resources, carbon release, and carbon reduction. The regulation is useful because it provides a structured method to quantify environmental loss. Without such a guideline, courts may face serious difficulties in determining the monetary value of ecological damage.

The calculation of environmental loss in forest and land fire cases becomes problematic when Minister of Environment Regulation No. 7 of 2014 is applied as a rigid mathematical formula rather than as an evidentiary guideline. In principle, the regulation is intended to assist courts in identifying and valuing ecological damage, including damage to soil, water regulation, biodiversity, carbon storage, and other ecosystem services. However, in practice, the aggregation of these components may produce extremely large compensation claims that appear detached from the actual factual circumstances of the fire.

Sadino, Sitorus, and Arifin, in their legal analysis of the calculation of loss value in an industrial forest fire case, show that environmental loss calculation in litigation may become controversial when the valuation method is not sufficiently connected to the proven cause of

fire, the real scale of damage, and the legal responsibility of the defendant (Sadino, Hotman, et al., 2020). The absurdity does not lie in the idea that environmental damage must be compensated, but in the possibility that ecological valuation may be transformed into an automatic financial burden without first establishing whether the defendant actually caused, contributed to, or could reasonably have prevented the fire.

This problem is also visible in court decisions where environmental compensation is calculated through broad ecological components, such as water storage, erosion control, nutrient recycling, biodiversity, genetic resources, carbon release, and carbon sequestration. These components are scientifically important, but legally they must be assessed with caution because not every ecological value that is theoretically lost can automatically be charged to one defendant in full.

If courts rely too heavily on abstract formulas, environmental compensation risks becoming disproportionate, especially where the origin of fire, the degree of corporate negligence, the defendant's control over the area, and the causal relationship between the defendant's conduct and the environmental damage remain disputed. Therefore, the use of Minister of Environment Regulation No. 7 of 2014 should be accompanied by a stricter judicial examination of causation, proportionality, actual ecological harm, and the restoration purpose of compensation. Without such examination, environmental compensation may shift from an instrument of ecological restoration into an excessive financial sanction that undermines substantive justice.

However, the use of such formulas also creates academic and practical problems. Environmental compensation can become highly abstract when the calculation relies on predetermined values per hectare or per ton without sufficient explanation of the actual ecological condition of the burned area. In the PT Kumai Sentosa case, the plaintiff initially claimed environmental loss of approximately Rp1.188 trillion based on 3,000 hectares, including ecological loss, economic loss, immaterial loss, restoration costs, verification costs, hydrological system repair, revegetation, and ten-year supervision. The court ultimately used 2,358 hectares as the basis of calculation and awarded Rp175,179,930,000 for ecosystem loss, while rejecting certain components such as verification costs, laboratory analysis, expert costs, supervision costs, economic loss, hydrological repair, and revegetation.

The court calculated ecosystem loss through components such as water storage, water regulation, erosion control, soil formation, nutrient recycling, waste decomposition, biodiversity, genetic resources, carbon release, and carbon reduction. This case illustrates both the utility and the controversy of environmental valuation: the court did not simply accept the entire claim, but the remaining amount was still very large and depended heavily on expert valuation and formulaic components.

Table 1. Critical Assessment of Environmental Loss Calculation under Minister of Environment Regulation No. 7 of 2014

Aspect of Calculation	Main Problem	Legal Criticism	Proposed Reform
Formula-based ecological loss	The formula may produce excessive compensation when ecological components are mechanically multiplied by the burned area	Environmental loss cannot be determined by a fixed formula alone because each location has different soil, peat, vegetation, and fire characteristics	Treat the formula as an evidentiary guideline, not an automatic calculation
Burned-area basis	Compensation is often calculated mainly from the total burned hectares	Burned area does not automatically prove causation, negligence, or the defendant's contribution to the fire	Require proof of fire origin, spread pattern, defendant's conduct, and preventability
Accumulation of loss components	Ecological loss, restoration cost, expert cost, supervision cost, and economic loss may be combined into one large claim	Different heads of loss have different legal bases and should not be accumulated without clear proof and justification	Separate actual ecological loss, restoration cost, public loss, and litigation-related costs
Restoration cost	Restoration may be calculated in unrealistic ways, such as replacing burned peat with compost	Ecological restoration requires site-specific recovery, not merely expensive technical assumptions	Require a restoration plan based on hydrology, revegetation, monitoring, and fire-prevention measures
Use of compensation	Compensation may be paid to the state treasury without clear restoration of the damaged site	Ecological compensation loses legitimacy if it becomes state revenue rather than environmental recovery	Require earmarking and court-supervised use of funds for ecological restoration

Source: Author's analysis based on Minister of Environment Regulation No. 7 of 2014

Sadino, Surono, and Arifin's study is relevant here because it specifically examines strict liability in oil palm plantation fire cases in Indonesia (Sadino, Agus, et al., 2020). They explain that forest and land fires became a major legal issue during 2015–2019 and that public opinion often places blame on oil palm companies as the main cause of fires, especially because

companies are perceived as using fire for land clearing. Their study is important for environmental compensation because it highlights the risk of generalizing liability against oil palm companies without carefully distinguishing between deliberate burning, negligence, fire spreading from outside the concession, lack of fire prevention systems, and situations where the company may itself be affected by fire. Thus, while strict liability reduces the need to prove fault, it should not erase the need to analyze causation and proportionality in compensation.

The question of whether the state has the right to sue for environmental compensation even when it is not the private owner of the land must be answered carefully. Under Indonesian environmental law, the state does have legal standing to sue, not because it owns every affected land parcel as a private proprietor, but because it represents public environmental interests. Article 90 of Law No. 32 of 2009 gives the government and regional governments the right to bring claims for compensation and certain actions against business activities that cause environmental pollution and/or damage. In the PT Kumai Sentosa decision, the court reasoned that the plaintiff had standing as the government to pursue legal action against business activities causing environmental damage and loss. The court also stated that environmental damage in the defendant's managed area caused loss to the environment represented by the plaintiff. Therefore, the state's right to sue is better understood as a public enforcement power or environmental guardianship, not as ordinary landownership.

This distinction is crucial. If the state sues as an environmental guardian, then compensation must correspond to public ecological loss, restoration costs, or loss of environmental functions. It should not be treated as if the state were claiming the market value of privately owned land unless the land itself is state land and such proprietary loss is legally established. The normative legitimacy of state claims depends on whether the claim is oriented toward ecological restoration and public interest, not merely toward revenue collection.

When environmental compensation is paid into the State Treasury without a clear mechanism ensuring restoration of the burned ecosystem, the remedy risks becoming disconnected from its ecological purpose. Putri, Sukarsa, and Imamulhadi argue that court decisions concerning environmental compensation do not automatically result in environmental recovery, especially when compensation is not clearly linked to restoration implementation (Putri et al., 2023). This criticism is highly relevant for plantation fire litigation.

The Tanjung Puting-related dispute in the PT Kumai Sentosa case illustrates the complexity of causation and fairness. The defendant argued that the fire originated from Tanjung Puting National Park and then spread into its plantation due to wind and dry conditions. The court rejected this defense and concluded that there was causation between the fire and omissions by the defendant, particularly failure to maintain adequate early warning, early detection, water management, and fire control infrastructure. Academically, regardless of whether one agrees with the court's conclusion, the case raises an important question: what should be the legal

consequence when a plantation fire allegedly originates from a state-administered conservation area and spreads into a private concession?

If such allegation is supported by sufficient evidence, then imposing the entire compensation burden on the plantation company may create injustice. Conversely, if the company's poor water management, lack of fire prevention facilities, or failure to control fire materially contributed to the spread and severity of damage, liability may still be justified. The decisive issue should therefore be the degree of causal contribution and preventability, not merely the location where damage was recorded.

The first major problem in determining environmental compensation is uncertainty in calculating environmental loss. Environmental loss is inherently difficult to quantify because ecological functions are not ordinary market commodities. Water storage, carbon sequestration, biodiversity, genetic resources, and nutrient cycling have real value, but their monetary assessment depends on expert assumptions, baseline data, valuation methods, discount rates, and ecological models. Ministerial formulas may assist courts, but they cannot replace case-specific scientific assessment.

Astuti and Fatimah show that expert knowledge plays a decisive role in Indonesian plantation fire litigation, particularly because science is used in court to establish the relationship between plantation practices, fire, and socio-ecological consequences (Astuti & Fatimah, 2024). This means that environmental compensation depends on how experts define the affected area, determine ecological functions, assess fire severity, and translate ecological degradation into monetary claims. Where data are incomplete or methods are not transparent, compensation may be challenged as abstract, excessive, or insufficiently connected to actual damage.

The second problem is the gap between compensation and restoration. Environmental compensation should ideally restore ecological functions or finance restoration activities. However, in many cases, large awards do not necessarily lead to actual recovery of soil, water systems, vegetation, biodiversity, or community welfare. Triana, Turistiati, and Monk, in their study on ecological justice and the Polluter Pays Principle, criticize dispute resolution models that focus on compensation to affected parties but fail to guarantee ecological restoration (Triana et al., 2024). Mendes and colleagues similarly argue that ecological restoration must be legally defined and connected to measurable recovery of ecosystem functions (Mendes et al., 2023). In plantation fire litigation, the same concern applies: a judgment may order payment, but unless the money is earmarked, monitored, and implemented for restoration at the damaged site, the legal remedy may satisfy formal accountability while failing ecological justice.

The third problem concerns proportionality. Environmental compensation must be proportionate to the actual extent of damage, the degree of causal contribution, the defendant's ability to prevent or mitigate the fire, and the restoration benefit expected from the remedy. Proportionality is especially important in strict liability cases. Strict liability may remove the requirement to prove fault, but it should not eliminate the need to establish a legally relevant

causal connection between the defendant's activity and the environmental loss. Wibisana's analysis of Indonesian wildfire litigation shows that strict liability in Indonesia has appeared in different forms and may produce doctrinal ambiguity if courts do not clearly distinguish fault, causation, and risk allocation (Wibisana, 2019). On the other hand, if a company controls a high-risk peatland plantation, drains peat excessively, lacks fire-control infrastructure, and fails to prevent foreseeable fire spread, substantial compensation may be proportionate.

The fourth problem is execution. Environmental judgments often face practical barriers after they are issued. Large monetary awards may be difficult to collect; restoration orders may be difficult to supervise; and technical restoration plans may be vague, costly, or ecologically unrealistic. In peatland cases, restoration may require long-term hydrological repair, rewetting, revegetation, monitoring, and prevention of repeated fires. A simple order to "restore the environment" is insufficient unless accompanied by clear technical standards, responsible institutions, timelines, financing mechanisms, and monitoring systems. Ramadhan and colleagues argue that the effectiveness of the Polluter Pays Principle as an ecological restoration mechanism is constrained by weak enforcement, unequal power relations, lack of transparency in compensation funds, and limited public participation (Ramadhan et al., 2022). This reinforces the argument that compensation must be integrated with enforceable restoration governance.

The environmental compensation in oil palm plantation fire litigation is legally necessary but normatively sensitive. The state may sue to protect public environmental interests, but its claim must be anchored in ecological loss and restoration, not in an abstract notion of ownership over all damaged land. Ministerial valuation formulas are useful but must be applied with scientific evidence, causal analysis, proportionality, and restoration planning. Cases such as PT Kumai Sentosa show that courts can scrutinize claimed components and reduce compensation, but they also reveal unresolved questions regarding causation, state standing, and the relationship between payment and actual restoration. A just model of environmental compensation must therefore move beyond the logic of "large payment equals environmental justice." True environmental justice requires that compensation be scientifically grounded, legally attributable, proportionate, enforceable, and directed toward the recovery of damaged ecological functions.

Constructing an Islamic Environmental Justice-Based Model of Ecological Compensation

Islamic environmental liability may be constructed from the doctrine of *dhaman*, which refers to the legal obligation to bear, repair, or compensate harm caused to another person, property, or legally protected interest. Although *dhaman* is commonly discussed in private law contexts, such as breach of contract, defective transactions, destruction of property, and tortious conduct, its normative logic is not limited to private loss. Asmuni argues that *dhaman* in Islamic legal theory also covers responsibility arising from unlawful acts that cause harm to others (Asmuni, 2013). This concept is relevant to environmental cases because ecological

damage does not merely affect an owned object; it harms air, water, soil, biodiversity, public health, and the environmental conditions that sustain collective life. Therefore, *dhaman* can serve as a doctrinal bridge between Islamic civil liability and modern ecological compensation.

This approach is consistent with the broader development of Islamic environmental law, which treats ecological protection not only as an ethical duty but also as a matter of public responsibility. Ramlan shows that Islamic norms in Southeast Asia may inform public policy, institutional responsibility, and legal strategies to prevent environmental harm (Ramlan, 2020). In the Indonesian context, this orientation is also reflected in MUI Fatwa No. 30 of 2016 on forest and land burning, which prohibits burning that causes environmental damage, pollution, public health impacts, or losses to others, and also condemns facilitating, allowing, or benefiting from such burning. Read together, *dhaman* and the fatwa provide a normative foundation for ecological compensation: liability should be imposed on parties that cause, contribute to, aggravate, or fail to prevent environmental harm within their legal capacity, while compensation must be directed toward restoration, prevention, and protection of public welfare.

The relevance of *dhaman* is especially clear in land and forest fire cases. Fire may destroy crops, reduce soil fertility, disrupt hydrological systems, release carbon, pollute the air, endanger public health, and weaken ecosystem resilience. In Islamic legal thought, such damage cannot be separated from the idea of human stewardship. Human beings may benefit from nature, but that benefit is limited by the duty to preserve balance and prevent destruction. Environmental use is therefore not a license for unrestrained exploitation. A systematic review on Islamic approaches to environmental preservation shows that Islamic environmental ethics are structured around harmony between human beings and nature, the role of humans as *khalifah*, and the duty to protect creation as part of religious responsibility(Zulkifli et al., 2023). On this basis, a party that intentionally burns land, negligently allows fire to spread, or fails to control a risk within its legal capacity may be required to repair the resulting ecological damage.

However, *dhaman* cannot be turned into automatic liability. Islamic law does not justify compensation without legally recognized harm. The basis of liability is *darar*, namely actual and legally relevant injury. In environmental disputes, *darar* must be established through evidence: what was damaged, how serious the damage was, what ecological functions were impaired, who was affected, and what form of restoration is necessary. Environmental injury is not limited to monetary loss. It includes soil degradation, air pollution, water contamination, biodiversity loss, carbon release, and harm to human well-being. Islamic legal discussions on environmental preservation and water pollution emphasize that natural resources supporting life must be protected because their destruction affects both individual welfare and public interest (Mohamad & Ismail, 2023). This approach makes it possible to treat ecological damage as legal harm without reducing the environment to an ordinary economic commodity.

The existence of *darar*, nevertheless, is not sufficient by itself to impose liability on a particular defendant. A just theory of Islamic environmental liability requires a legally relevant

causal connection between the conduct, omission, risk control, or management failure of a party and the harm that occurs. This requirement is crucial in plantation and forest fire litigation because fire rarely follows neat administrative boundaries. It may originate from intentional burning, poor fire-prevention infrastructure, unmanaged canals, lack of supervision, third-party conduct, surrounding community land, or state-administered conservation areas. If liability is imposed merely because fire appears within a landholder's area, without proof that the landholder caused, contributed to, failed to prevent, or aggravated the fire, compensation loses its legal and ethical foundation. Modern environmental criminal and civil liability scholarship has similarly warned that punishment or liability detached from culpability and causal responsibility may weaken the legitimacy of environmental enforcement itself (Ali et al., 2022).

This does not mean that Islamic law weakens environmental accountability. On the contrary, it strengthens accountability by requiring precision. A party that creates fire risk and benefits from destructive land clearing should not escape responsibility. A party that controls a hazardous area but fails to provide firebreaks, water management, monitoring, emergency response, and adequate supervision may also bear liability. Yet a party whose productive plantation is burned by fire originating from outside its control cannot be treated in the same manner as an intentional burner. Islamic legal reasoning requires differentiation among the perpetrator, the negligent party, the risk controller, and the victim. This distinction is essential because environmental compensation must not become a doctrine that transforms the victim of fire spread into the payer of all ecological losses.

The concept of *ta'widh* clarifies the remedial dimension of this framework. In ordinary civil disputes, *ta'widh* is often understood as monetary compensation for proven loss. In environmental cases, however, compensation must go beyond payment. If the damaged object is ecological function, then the remedy must be directed toward ecological repair. Soil quality must be rehabilitated; hydrological systems must be restored; vegetation may need to be replanted; health impacts must be mitigated; and future fires must be prevented. Money is only a means. It is not the final purpose of compensation. Research on environmental sustainability from a Sharia perspective stresses that Islamic values must be translated into social and institutional practices capable of preserving balance among human welfare, economic development, and the natural environment (Norita Mohd Nasir et al., 2022). Thus, *ta'widh* in environmental cases should be read as restorative compensation, not merely fiscal payment.

This restorative reading is important because environmental compensation often fails when damages are paid without a clear restoration plan. A large monetary award may appear strong, but it does not necessarily restore soil, water, biodiversity, or air quality. Islamic law asks a different question: has the harm been removed, reduced, or repaired? If compensation is paid into a general treasury without transparent allocation to the damaged ecosystem, the remedy may remain formally valid but substantively weak. In this sense, Islamic law converges with contemporary ecological restoration theory. Restoration must have a clear legal meaning and

must be linked to measurable recovery of ecosystem functions (Mendes et al., 2023). A remedy that produces revenue but leaves the damaged ecosystem unrestored does not fully satisfy the logic of *ta'widh* or the public purpose of environmental law.

The maxim *la darar wa la dirar* provides the moral and legal core of Islamic environmental liability. The maxim can be read in two directions. First, no one may inflict harm, including ecological harm. Second, legal responses to harm must not create new injustice. The first dimension justifies strong liability for those who burn, pollute, degrade, or fail to prevent foreseeable ecological damage. The second dimension prevents courts or regulators from imposing disproportionate liability on parties whose responsibility has not been established. This balance is important in plantation fire litigation. Environmental law must be firm against polluters, but it must not punish the wrong party simply because that party is easier to sue. Islamic legal ethics on climate and environmental issues, including fatwa-based responses in Indonesia, increasingly emphasize that environmental protection must be joined with justice, accountability, and responsible governance (Harnowo & Habib, 2024).

The principle of *maslahah* then expands the discussion from individual compensation to public interest. Environmental protection is a matter of *maslahah* because ecological destruction threatens life, health, property, livelihood, social stability, and intergenerational welfare. Land and forest fires are not isolated events. Their smoke travels; their carbon emissions affect the atmosphere; their destruction of soil and water systems affects agriculture and settlement; and their long-term ecological effects burden communities beyond the site of burning. The *maqasid al-sharia* framework on natural resource management requires sustainability, public benefit, and responsible use of resources as core elements of legal reasoning(Md Ramli, 2020). Therefore, environmental compensation should not be designed merely to win litigation or impose a dramatic financial burden. It should be designed to restore public welfare.

Yet *maslahah* is not a blank authorization for excessive state claims. A state may sue to protect the environment, but it must act as a trustee of ecological restoration, not merely as a claimant seeking large monetary awards. A remedy claimed in the name of public interest must satisfy legality, evidence, proportionality, and genuine restoration. If compensation is detached from the affected site, lacks an implementation plan, or is not transparently monitored, the invocation of *maslahah* becomes rhetorical. Scholarship on Sharia-based water governance in Indonesia shows that *maqasid al-sharia*, *fiqh al-bi'ah*, and Islamic ethics can offer practical guidance only when they are translated into concrete institutional arrangements, measurable indicators, and accountable governance (Hamdi et al., 2025). The same lesson applies to compensation for plantation fires.

The *maqasid al-sharia* perspective gives further depth to this argument. Fire-related environmental damage threatens *hifz al-nafs* because smoke and pollution endanger health. It affects *hifz al-mal* because land, crops, property, and livelihoods are damaged. It undermines *hifz al-nasl* because future generations inherit degraded ecosystems. It may also affect *hifz al-*

'aql when haze disrupts education, productivity, and social life. Conceptual analysis of Islam and environmental sustainability shows that stewardship, trust, prohibition of corruption, and responsibility toward nature are not marginal themes; they form a coherent ethical structure for environmental protection (Bsoul et al., 2022). Compensation, therefore, should be evaluated not by the size of the award alone, but by whether it actually protects life, property, future generations, and ecological order.

Table 2. Islamic Environmental Justice Model for Ecological Compensation

Islamic Legal Principle	**Legal Function**	**Assessment Criteria in Plantation Fire Litigation**	**Contribution to Ecological Compensation**
Dhaman	Establishes responsibility to compensate harm	Is there a legally responsible party connected to the damage?	Prevents compensation from being imposed without attribution of responsibility
Darar	Identifies legally recognized harm	What actual ecological harm has been proven?	Ensures compensation is based on real damage, not abstract assumptions
Ta'widh	Directs compensation toward repair	Does the compensation restore the damaged ecological function?	Shifts compensation from financial sanction to restoration remedy
Maslahah	Protects public welfare and ecological interest	Does the remedy benefit affected communities and restore the ecosystem?	Ensures compensation serves public interest, not merely state revenue
La darar wa la dirar	Prevents harm and prevents unjust legal burden	Does the remedy prevent ecological damage without creating new injustice?	Balances environmental enforcement with proportional and procedural justice

Source: Author's analysis based on Islamic legal doctrines of dhaman, darar, ta'widh, maslahah, and la darar wa la dirar.

Islamic environmental liability also resonates with the concept of *fiqh al-bi'ah*. This field does not merely repeat general moral appeals to protect nature. It asks how Islamic legal reasoning can address concrete environmental problems through duties, prohibitions, remedies, and governance mechanisms. Studies on forest management from a *fiqh al-bi'ah* perspective demonstrate that local environmental governance can be assessed through Islamic legal norms

when forest resources are treated as a trust that must be managed for ecological and social benefit (Gayo et al., 2024). In plantation fire litigation, *fiqh al-bi'ah* can help courts and policymakers move beyond the binary of "company versus state" toward a more precise inquiry into who caused the harm, who had the capacity to prevent it, what ecological functions were lost, and what remedy is most likely to restore balance.

The final reconstruction may be formulated through six principles. First, *dhaman-based responsibility*, liability arises only when harm is connected to a legally responsible party. Second, *darar-based assessment*, compensation must reflect actual and proven environmental harm. Third, causation-sensitive liability, the defendant must have caused, contributed to, or failed to prevent the harm within its legal capacity. Fourth, *ta'widh-oriented restoration*: compensation must be directed to ecological repair, not merely monetary collection. Fifth, *maslahah-based governance*, remedies must serve public welfare, affected communities, and future generations. Sixth, *la darar wa la dirar*, environmental enforcement must prevent ecological harm without creating new injustice. This framework is consistent with Islamic legal philosophy that treats conservation as part of human responsibility to preserve balance, prevent corruption on earth, and protect collective welfare (Munib et al., 2022).

Accordingly, the contribution of Islamic law to plantation fire compensation is not to deny environmental liability, but to reconstruct its foundation. It supports strong responsibility for polluters, negligent actors, and risk controllers. At the same time, it rejects arbitrary liability imposed on parties that are not proven to have caused or contributed to the harm. The central question is not simply how much compensation should be paid, but who should pay, on what causal basis, for which proven damage, and toward what restoration plan. In this sense, *dhaman*, *darar*, *ta'widh*, *maslahah*, and *la darar wa la dirar* can enrich Indonesian environmental law by transforming compensation from a financial sanction into an instrument of ecological justice.

Conclusion

The determination of ecological compensation in Indonesian oil palm plantation fire litigation still faces serious problems in causation, proportionality, and restoration. Courts may impose substantial compensation because fire occurred within a plantation concession, yet the origin of fire, the defendant's causal contribution, the degree of negligence, and the actual capacity to prevent or control the fire are not always examined with sufficient rigor. Minister of Environment Regulation No. 7 of 2014 is useful as an initial guideline for valuing environmental loss, but its formulaic application may produce disproportionate figures when ecological components are aggregated without a strict inquiry into actual damage, causal attribution, preventability, and restoration needs.

Islamic environmental justice provides a corrective framework for reconstructing ecological compensation. *Dhaman* requires liability to be attached only to a party that causes, contributes to, aggravates, or fails to prevent harm within its legal capacity. *Darar* demands that

compensation be based on actual ecological damage, not abstract or speculative valuation. *Ta'widh* directs compensation toward repair and restoration, not merely payment to the state. *La darar wa la dirar* prevents both ecological harm and unjust legal burden, while *maslahah* ensures that remedies serve public welfare, ecological recovery, and intergenerational justice. Therefore, a fair model of ecological compensation must distinguish polluters from victims, separate ecological loss from restoration costs, and ensure that any compensation awarded by the court is transparently used to restore damaged environmental functions.

For this reason, future reform must amend Minister of Environment Regulation No. 7 of 2014 so that environmental loss valuation is no longer applied as a rigid mathematical formula that automatically produces excessive compensation. The regulation should require a clearer causation test, proportional liability assessment, site-specific ecological evidence, and a mandatory restoration plan before compensation is awarded. In future litigation, the government should not only formulate claims for monetary compensation, but also include specific petitum requiring the defendant to implement future fire-prevention measures, such as improving early warning systems, maintaining water management infrastructure, building firebreaks, and strengthening emergency response capacity. Ecological compensation will only be just when it restores damaged ecosystems, prevents repeated fires, and imposes responsibility on the right party in the right measure.

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