

GOVERNING GREEN FINANCE IN ACEH: LEGAL FRAGMENTATION, ISLAMIC ECONOMIC LAW AND INDONESIAN POSITIVE LAW

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Abstract

Green finance in Aceh sits at the intersection of Indonesia's sustainable-finance regime, Aceh's special autonomy, mandatory sharia compliance and the environmental harms associated with unlicensed gold mining. This article argues that the framework is procedurally dense but substantively fragmented: it requires plans, disclosure and taxonomic classification without integrating ecological legality, harm prevention and remediation into financing duties. Through doctrinal analysis and limited functional comparison, it constructs a Prevent-Transition-Restore model. The model links negative screening and traceability to inclusive sharia financing for livelihood transition and ring-fenced instruments for ecological restoration, while preserving the distinction between *fiqh* reasoning and enforceable positive law.

Keywords: green finance; Aceh; Islamic finance; *fiqh muamalah*; unlicensed gold mining; environmental law

Abstrak

Keuangan hijau di Aceh berada di persimpangan antara rezim keuangan berkelanjutan Indonesia, otonomi khusus Aceh, kewajiban kepatuhan syariah, dan dampak lingkungan yang terkait dengan penambangan emas tanpa izin. Artikel ini berpendapat bahwa kerangka kerja tersebut padat secara prosedural namun terfragmentasi secara substantif: kerangka kerja tersebut mensyaratkan adanya rencana, pengungkapan informasi, dan klasifikasi taksonomi tanpa mengintegrasikan legalitas ekologis, pencegahan dampak, dan remediasi ke dalam kewajiban pembiayaan. Melalui analisis doktrinal dan perbandingan fungsional terbatas, artikel ini membangun model "Pencegahan-Transisi-Pemulihan". Model ini menghubungkan penyaringan negatif dan keterlaksanaan dengan pembiayaan syariah inklusif untuk transisi mata pencaharian serta instrumen yang dipisahkan secara khusus untuk pemulihan ekologi, sambil tetap mempertahankan perbedaan antara penalaran fiqh dan hukum positif yang dapat ditegakkan.

Kata kunci: keuangan hijau; Aceh; keuangan syariah; fiqh muamalah; penambangan emas tanpa izin; hukum lingkungan

INTRODUCTION

Finance is not environmentally neutral. Decisions about whom to fund, on what terms and subject to which covenants can enable ecological harm, accelerate a transition away from it, or leave damaged landscapes without resources for restoration. That proposition has a constitutional dimension in Indonesia. The 1945 Constitution protects the right to a good and healthy environment and requires the national economy to be organised according to sustainability and environmental insight.¹ It also has a regulatory dimension: financiers can influence activities that lie beyond the immediate reach of public enforcement because capital allocation, monitoring and exit occur throughout a project's life.²

Indonesia has progressively translated that insight into a sustainable-finance architecture. Regulation of the Financial Services Authority Number 51/POJK.03/2017 ('POJK 51/2017') defines sustainable finance broadly and requires financial-services institutions, issuers and public companies to adopt sustainable-finance principles, prepare action plans and publish sustainability

¹ Constitution of the Republic of Indonesia 1945, arts 28H(1) and 33(4).

² Benjamin J Richardson, *Socially Responsible Investment Law: Regulating the Unseen Polluters* (Oxford: Oxford University Press, 2008), 3–18, 511–36.

reports.³ The Financial Sector Development and Strengthening Act 2023 ('P2SK Act') subsequently placed sustainable finance in primary legislation.⁴ The Indonesian Taxonomy for Sustainable Finance ('TKBI') supplies a common classification language, while Regulation of the Financial Services Authority Number 18 of 2023 governs sustainability-oriented debt securities and sukuk. Together, these instruments mark an important movement from voluntary aspiration towards regulatory structure.

Aceh adds a distinctive legal layer. Its special-autonomy settlement authorises regional *qanun* within the national legal order, and Qanun Aceh Number 11 of 2018 on Sharia Financial Institutions ('Qanun 11/2018') requires financial institutions operating in Aceh and financial transactions undertaken there to conform to sharia principles.⁵ Of particular significance, the Qanun expressly identifies sustainability as one of the governing principles of Aceh's financial system. Aceh is therefore not merely a location in which national green-finance rules apply. It is a jurisdiction in which national financial regulation, regional autonomy, environmental law and an enacted commitment to sharia-compliant finance must be read together.

Unlicensed gold mining—commonly described as *pertambangan emas tanpa izin* ('PETI')—exposes the weaknesses of that composite order. A recent remote-sensing study of West Aceh recorded 13,030.84 hectares of forest-cover loss between 2019 and 2024 and attributed 12.8 per cent of the observed loss to illegal gold-mining activity.⁶ At national level, Indonesia's Financial Transaction Reports and Analysis Centre ('PPATK') reported that transactions suspected of being connected with PETI reached Rp185.03 trillion during 2023–2025, with total turnover of Rp992 trillion.⁷ The first source is geographically specific but does not trace finance; the second traces suspected

³ Otoritas Jasa Keuangan, Regulation Number 51/POJK.03/2017 on the Implementation of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies (18 July 2017), arts 1(8), 2, 4–7 and 10–12, <https://ojk.go.id/id/regulasi/Documents/Pages/Penerapan-Kuangan-Berkelanjutan-bagi-Lembaga-Jasa-Kuangan,-Emiten,-dan-Perusahaan-Publik/SAL%20POJK%2051%20-%20keuangan%20berkelanjutan.pdf>.

⁴ Indonesia, Act Number 4 of 2023 on Financial Sector Development and Strengthening, State Gazette 2023 Number 4, Supplement Number 6845, arts 222–224, as amended by Act Number 4 of 2026, <https://peraturan.bpk.go.id/Details/240203/uu-no-4-tahun-2023>.

⁵ Province of Aceh, Qanun Number 11 of 2018 on Sharia Financial Institutions, Aceh Gazette 2019 Number 8, Supplement Number 111, arts 2–6, <https://jdih.acehprov.go.id/dih/detail/4fffb507-25de-4620-a1aefcf53d45ccb6>.

⁶ Fajrul Hani et al, 'Monitoring Forest Cover Loss Due to the Impact of Mining Activities Using Google Earth Engine in West Aceh Regency', *Aceh International Journal of Science and Technology* 14, no 1 (2025): 43–51, 48–49, <https://doi.org/10.13170/aijst.14.1.43410>.

⁷ Pusat Pelaporan dan Analisis Transaksi Keuangan, 'Catatan Capaian Strategis PPATK Tahun 2025: Menjaga Kedaulatan dan Integritas Ekonomi Bangsa', 29 January 2026, section B.4(a), accessed 27 August 2026, https://www.ppatk.go.id/siaran_pers/read/1594/catatan-capaian-strategis-ppatk-tahun-2025-menjaga-kedaulatan-dan-integritas-ekonomi-bangsa-jakarta-28-januari-2026-b001hm0531i2026-.html.

financial activity but is not Aceh-specific. Read with those limits, the sources demonstrate both material environmental harm and a plausible financial-system nexus, not proof that any named financial institution funded PETI in Aceh.

The central legal problem is consequently more precise than the question whether green finance is desirable. It is whether the existing rules convert sustainable-finance commitments into operational duties capable of (i) preventing funds and payment services from enabling unlawful or destructive activity, (ii) financing a lawful and socially credible transition for affected communities, and (iii) mobilising restoration capital without transferring a polluter's liability to the public. The present framework supplies parts of each function, but distributes them across financial, environmental, mining, anti-money-laundering and Acehnese law. Classification, disclosure, sharia review, licensing, law enforcement and reclamation are too often treated as separate regulatory conversations.

This article argues that the resulting framework is procedurally dense but substantively fragmented. POJK 51/2017 and the P2SK Act establish planning, reporting and risk-management obligations; the TKBI improves classification; Qanun 11/2018 makes sustainability an internal principle of Aceh's sharia financial order; and mining and environmental law prohibit or condition harmful conduct. Yet these components do not by themselves provide an integrated financing protocol for the PETI context. In particular, legality checks are not consistently connected to environmental due diligence, disclosure is not the same as a duty to prevent harm, and sharia-compliant contractual form does not guarantee a sustainable outcome.

To address that gap, the article develops a Prevent-Transition-Restore ('PTR') framework. 'Prevent' uses legality screening, environmental due diligence, beneficial-ownership verification, transaction monitoring and enforceable covenants to stop finance from enabling unlawful or unacceptable harm. 'Transition' prevents indiscriminate de-risking from displacing vulnerable workers into deeper informality by supporting lawful formalisation where ecologically suitable and alternative livelihoods where it is not. 'Restore' combines polluter-funded reclamation with ring-fenced green sukuk, sukuk wakaf and blended instruments for legacy damage and public-benefit projects. The framework treats *fiqh muamalah* as a source of principled interpretation—especially the prevention of harm, public benefit and responsibility for consequences—while recognising that enforceable duties must rest on valid positive law or contract.

The argument proceeds in seven further parts. Part II states the method and limits. Part III evaluates Indonesia's sustainable-finance architecture. Part IV locates that architecture within Aceh's composite legal order. Part V uses PETI as a regulatory stress test. Part VI develops the contribution, and limits, of *fiqh muamalah*. Part VII constructs the PTR framework and allocates institutional responsibilities. Part VIII concludes.

DATA AND METHOD

This is a doctrinal legal study. It interprets constitutional provisions, statutes, government regulations, OJK regulations and guidance, Acehese *qanun*, and relevant instruments of Islamic finance according to their hierarchy, scope and regulatory function. The law is stated as at 27 August 2026. The analysis therefore treats the P2SK Act as amended by Act Number 4 of 2026 and the Mineral and Coal Mining Act as most recently amended by Act Number 2 of 2025.⁸ The amendment to the P2SK Act did not displace the sustainable-finance provisions in articles 222–224, but the citation to the amended Act avoids presenting the 2023 text as if no later amendment existed.⁹

The study is 'law in context' only in a disciplined and limited sense. It uses the West Aceh forest-cover study to identify a local environmental problem and PPATK's publication to identify a national financial-crime risk. It does not purport to establish causation between a particular financing decision and a particular mine, measure institutional compliance, or provide an ethnography of mining communities. Those questions require account-level data, fieldwork and safeguards that are outside this article. The distinction matters: normative recommendations are stronger, not weaker, when their empirical premises are made falsifiable.

The comparative element is functional rather than transplant-oriented. International scholarship and selected global standards are used to distinguish four regulatory functions: classification, disclosure, prudential risk management and impact-oriented conduct. The comparison does not assume that European or Basel instruments form part of Indonesian law. It asks instead what each regulatory technique can and cannot achieve, and whether Indonesia's framework leaves a function unperformed. This approach is

⁸ Indonesia, Act Number 2 of 2025 on the Fourth Amendment to Act Number 4 of 2009 on Mineral and Coal Mining, State Gazette 2025 Number 29, Supplement Number 7100, <https://peraturan.bpk.go.id/Details/316682/uu-no-2-tahun-2025>.

⁹ Indonesia, Act Number 4 of 2026 on the Amendment to Act Number 4 of 2023 on Financial Sector Development and Strengthening, State Gazette 2026 Number 62, Supplement Number 7180, effective 17 June 2026, <https://peraturan.bpk.go.id/Details/350166/uu-no-4-tahun-2026>.

especially important for the TKBI: a taxonomy can discipline language and direct attention, but it cannot replace environmental licensing, customer due diligence, supervision or remedies.

RESULTS AND DISCUSSION

A. Green Finance as Law: From Labels to Duties

1. *POJK 51/2017 and the P2SK Act*

POJK 51/2017 provides the core regulatory vocabulary. It defines sustainable finance as comprehensive support from the financial-services sector for sustainable economic growth by aligning economic, social and environmental interests. Its principles include responsible investment, sustainable business strategy, management of social and environmental risks, governance, informative communication, financial inclusion, priority-sector development and coordination.¹⁰ Covered institutions must prepare a Sustainable Finance Action Plan, implement it effectively, submit sustainability reports and make those reports public.¹¹ These are legal obligations, not merely corporate-social-responsibility preferences.

The regulation nevertheless relies heavily on process. It obliges a regulated entity to plan, govern and report, but generally leaves the institution substantial discretion over the depth of client-level environmental due diligence and the consequences of adverse findings. Its express administrative sanctions are a reprimand or written warning.¹² That sanction design does not make the regulation meaningless; supervisory dialogue and reputational pressure can alter conduct. It does, however, make the quality of implementation, data and OJK supervision decisive. A report can reveal risk without preventing it, and an action plan can become a compliance document rather than a constraint on capital allocation.

Articles 222–224 of the P2SK Act strengthen the statutory foundation. Financial-sector businesses, issuers and public companies must implement sustainable finance in their business activities, develop the necessary capacity and submit sustainability reports. The Act also provides for a sustainable-finance committee and a taxonomy to support coordination and policy development.¹³ This elevation is important for regulatory legitimacy and

¹⁰ Otoritas Jasa Keuangan, POJK 51/2017, arts 1(8) and 2(2).

¹¹ Otoritas Jasa Keuangan, POJK 51/2017, arts 4–7 and 10–12.

¹² Otoritas Jasa Keuangan, POJK 51/2017, art 13.

¹³ Indonesia, P2SK Act, as amended, arts 222–224.

cross-sector coordination. Yet the primary legislation remains framework legislation: operational content continues to depend on OJK rules, supervision and the interaction with sectoral environmental and licensing law.

The current legal position must be distinguished from reform proposals. In February 2026, OJK published a consultation draft intended to revise and replace POJK 51/2017.¹⁴ A consultation draft can reveal regulatory direction, but it is not an operative source of duty. As at the cut-off date for this article, POJK 51/2017 remained the operative regulation. Conflating proposal and law would obscure precisely the implementation gap that reform is meant to address.

2. Classification, securities and prudential risk

The TKBI Version 3, issued in February 2026 and updated on 31 March 2026, supplies an interoperable classification system intended to guide capital allocation and support Indonesia's net-zero and sustainable-development objectives.¹⁵ Its value lies in comparability. A common set of criteria can reduce arbitrary self-labelling, expose transition assumptions and give lenders, issuers and supervisors a shared language. For a geographically and sectorally specific risk such as mining in Aceh, a taxonomy may also prompt more granular information about the activity, safeguards and performance thresholds.

Classification is nevertheless a gate, not a complete journey. It does not determine whether a customer holds a valid mining licence, whether a beneficial owner is concealing proceeds, whether a project breaches an environmental approval, or who must pay for historic contamination. Nor does the classification of an activity automatically establish additionality. The longstanding critique of socially responsible investment is that vague labels can exaggerate environmental contribution while leaving underlying incentives intact.¹⁶ Sustainable-finance regulation therefore needs a transmission mechanism between taxonomy, credit decision, monitoring, enforcement and environmental outcome.

¹⁴ Otoritas Jasa Keuangan, 'Draft Regulation on the Implementation of Sustainable Finance', consultation draft, February 2026, accessed 27 August 2026, <https://ojk.go.id/id/regulasi/otoritas-jasa-keuangan/rancangan-regulasi/Pages/RPOJK-SF.aspx>.

¹⁵ Otoritas Jasa Keuangan, *Indonesia Taxonomy for Sustainable Finance Version 3* (Jakarta: OJK, 2026), updated 31 March 2026, <https://ojk.go.id/en/Publikasi/Roadmap-dan-Pedoman/Sektor-Jasa-Kuangan/Kuangan-Berkelanjutan/Pages/Indonesia-Taxonomy-for-Sustainable-Finance-TKBI-Version-3.aspx>.

¹⁶ Richardson, *Socially Responsible Investment Law*, 60–91, 511–36; Dirk Schoenmaker and Willem Schramade, *Principles of Sustainable Finance* (Oxford: Oxford University Press, 2019), 13–32.

POJK 18/2023 supplies a more transaction-specific regime for debt securities and sukuk founded on sustainability. It expands the earlier green-bond framework to include green sukuk, social instruments, sustainability instruments, sukuk wakaf and sustainability-linked instruments, and addresses use of proceeds, disclosure, reporting, external review and administrative sanctions.¹⁷ These controls are particularly relevant to restoration finance because ring-fencing and independent review can reduce the risk that proceeds are diverted. Their domain, however, is the issuance of covered securities; they do not constitute a general client-level due-diligence code for ordinary bank financing or payment services.

Prudential standards add a different rationale. The Basel Committee's principles treat climate-related drivers as sources of familiar financial risks and call for governance, internal controls, assessment, monitoring and supervision.¹⁸ This is useful but incomplete for PETI. A lender may be able to price a risk or avoid a loss while local communities still bear contaminated water, deforestation and abandoned land. Prudential materiality asks whether environmental harm affects the institution; environmental law also asks whether the institution's conduct enables harm to others. A coherent regime must attend to both directions of materiality.

3. The limits of disclosure and functional comparison

Disclosure can reduce information asymmetry, facilitate comparison and enable supervisory or market discipline. It is therefore indispensable. But disclosure works only if the reported information is specific, comparable, assured and connected to decision-makers who have both incentives and power to act. Steuer and Tröger demonstrate that raw-data disclosure and sustainability labels address different information problems and may not, by themselves, generate enough discipline to achieve public climate objectives.¹⁹ The point transfers to Aceh's mining context: knowing that a portfolio is described as sustainable is less informative than knowing whether finance was

¹⁷ Otoritas Jasa Keuangan, Regulation Number 18 of 2023 on the Issuance and Requirements of Sustainability-Based Debt Securities and Sukuk (5 October 2023), especially arts 2–6 and provisions on external review, reporting and sanctions, <https://keuanganberkelanjutan.ojk.go.id/keuanganberkelanjutan/Peraturan/View/610/penerbitan-dan-persyaratan-efek-bersifat-utang-dan-sukuk-berlandaskan-keberlanjutan>.

¹⁸ Basel Committee on Banking Supervision, *Principles for the Effective Management and Supervision of Climate-Related Financial Risks* (Basel: Bank for International Settlements, 2022), principles 1–12, <https://www.bis.org/bcbs/publ/d532.htm>; Network for Greening the Financial System, *A Call for Action: Climate Change as a Source of Financial Risk* (Paris: NGFS, 2019), 4–7, <https://www.ngfs.net/en/publications-and-statistics/publications/first-comprehensive-report-call-action>.

¹⁹ Sebastian Steuer and Tobias H Tröger, 'The Role of Disclosure in Green Finance', *Journal of Financial Regulation* 8, no 1 (2022): 1–50, 3–8 and 41–47, <https://doi.org/10.1093/jfr/fjac001>.

screened against licence databases, geospatial risk, mercury use, beneficial ownership and remediation obligations.

The European Union's taxonomy offers a limited functional comparator. It uses technical screening criteria and 'do no significant harm' safeguards to discipline what may be called environmentally sustainable.²⁰ Its lesson is not that Aceh should copy a foreign code. It is that classification becomes legally meaningful when linked to evidence, minimum safeguards and disclosure at the activity or product level. Even then, a taxonomy does not itself create a prohibition on financing unlawful conduct; that work belongs to licensing, financial-crime controls, fiduciary or conduct rules, contract and enforcement.

Indonesia's architecture accordingly contains the correct regulatory building blocks but not yet an integrated PETI protocol. POJK 51/2017 supplies plans and reporting; the P2SK Act provides statutory authority and coordination; the TKBI supplies classification; and POJK 18/2023 provides enhanced controls for sustainability securities. The missing link is an operational rule connecting those instruments to environmental legality, financial-integrity data and enforceable lifecycle obligations in high-risk activities. Aceh's legal order provides a promising place to construct that connection, but only if institutional competence is respected.

B. Aceh's Composite Legal Order

1. Special autonomy and regulatory hierarchy

Act Number 11 of 2006 on the Government of Aceh establishes a special-autonomy framework that recognises Aceh's authority to regulate aspects of Islamic law, economic life and natural-resource governance.²¹ A *qanun* is regional legislation, not a free-standing source above national law. The national law on legislative formation recognises Aceh's *qanun* as a form of provincial regulation, while the special-autonomy statute supplies its distinctive competence.²² This double character is essential. It gives Aceh room for locally grounded regulation but also subjects regional measures to the Constitution, statutes and the allocation of national regulatory authority.

²⁰ Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the Establishment of a Framework to Facilitate Sustainable Investment [2020] OJ L198/13, arts 3 and 17; Steuer and Tröger, 'Role of Disclosure', 19–27.

²¹ Indonesia, Act Number 11 of 2006 on the Government of Aceh, State Gazette 2006 Number 62, Supplement Number 4633, especially arts 16, 125, 156 and 165, <https://peraturan.bpk.go.id/Details/40174/uu-no-11-tahun-2006>.

²² Indonesia, Act Number 12 of 2011 on the Formation of Laws and Regulations, State Gazette 2011 Number 82, Supplement Number 5234, as amended, art 7 and elucidation to art 7(1)(f).

Financial-services prudential regulation and supervision remain centrally structured through OJK. Aceh cannot, merely by invoking sustainability, displace national licensing or create inconsistent capital requirements for banks. It can, however, regulate matters within its competence: regional development planning, management of regional funds and enterprises, environmental information, administrative coordination, local procurement, and implementation of its enacted sharia financial order. A legally durable PTR model must therefore use complementary instruments rather than a single overbroad *qanun*.

The same caution applies to mining. Aceh possesses special-autonomy and regional natural-resource powers, but national mining legislation has been repeatedly amended and has reallocated important licensing functions. The proper response is not to assume that every local or national provision silently overrides the other. It is to identify the function at issue—licensing, supervision, land use, environmental approval, financial screening or reclamation—and allocate it to the legally competent institution. Regulatory fragmentation becomes dangerous when an institution treats the absence of its own power as the absence of anyone's responsibility.

2. *Qanun 11/2018: sharia form and sustainability purpose*

Qanun 11/2018 requires financial institutions operating in Aceh to be organised on sharia principles and provides that financial contracts in Aceh are to use sharia principles.²³ Its stated purposes extend beyond the avoidance of *riba*: they include strengthening an Islamic economic system, supporting funding needs, enabling social functions for public benefit, improving access and increasing productivity and welfare. This broader legislative purpose resists a thin understanding of sharia compliance as a checklist of contractual forms.

Article 3 is the doctrinal hinge. It lists justice, trust, brotherhood, benefit, independence, cooperation, ease, openness, sustainability and universality as principles of implementation.²⁴ 'Sustainability' is therefore part of Aceh's positive law, not merely an ethical gloss imported from global ESG discourse. Read with benefit, justice and trust, it permits the environmental consequences of financing to enter the interpretation of institutional policies and contracts. It also supplies a regional legal bridge between national sustainable-finance obligations and Islamic legal reasoning.

²³ Province of Aceh, Qanun 11/2018, arts 2, 4–6.

²⁴ Province of Aceh, Qanun 11/2018, art 3.

That bridge must not be overstated. Article 3 does not specify a taxonomy, prohibit a defined category of finance, or allocate environmental liability. Nor does the sharia character of a *murabahah*, *mudharabah* or *musharakah* transaction establish that the funded activity is lawful under mining and environmental law. The Qanun's principles must be operationalised through valid institutional policies, OJK requirements, contractual conditions and – where Aceh has competence – implementing regional rules. Otherwise, the sustainability principle risks becoming a recital with no decision rule.

Qanun 11/2018 also provides an institutional pathway through local sharia supervisory bodies.²⁵ These bodies can evaluate whether financing policy reflects the Qanun's principles and can develop guidance on harm, public benefit and prohibited assistance. They should not be asked to certify technical environmental compliance beyond their expertise or to replace OJK and environmental authorities. A credible model therefore pairs sharia supervision with environmental, legal and financial-integrity expertise.

3. Environmental and mining obligations

The constitutional right to a good and healthy environment and the sustainability clause in article 33(4) support an integrated reading of financial and environmental law.²⁶ Act Number 32 of 2009 on Environmental Protection and Management, as amended, embodies prevention, precaution, participation, polluter responsibility and sustainable development.²⁷ Government Regulation Number 22 of 2021 structures environmental approvals, environmental-quality protection, supervision and administrative sanctions.²⁸ These instruments regulate the activity and its impacts; they also generate information – approvals, compliance status, sanctions and restoration duties – that a financier can use.

Mining without the required licence is prohibited under the Mineral and Coal Mining Act, including article 158 as retained within the repeatedly amended statutory framework.²⁹ Aceh's Qanun Number 15 of 2013, amended

²⁵ Province of Aceh, Qanun 11/2018, art 48.

²⁶ Constitution of the Republic of Indonesia 1945, arts 28H(1) and 33(4).

²⁷ Indonesia, Act Number 32 of 2009 on Environmental Protection and Management, State Gazette 2009 Number 140, Supplement Number 5059, as amended by Act Number 6 of 2023, arts 2, 3, 13, 65, 69, 87 and 88, <https://peraturan.bpk.go.id/Details/38771/uu-no-32-tahun-2009>.

²⁸ Indonesia, Government Regulation Number 22 of 2021 on the Administration of Environmental Protection and Management, State Gazette 2021 Number 32, Supplement Number 6634, <https://peraturan.bpk.go.id/Details/161852/pp-no-22-tahun-2021>.

²⁹ Indonesia, Act Number 4 of 2009 on Mineral and Coal Mining, State Gazette 2009 Number 4, Supplement Number 4959, art 158, as most recently amended by Act Number 2 of 2025, <https://peraturan.bpk.go.id/Home/Details/38578/uu-no-4-tahun-2009>.

by Qanun Number 15 of 2017, regulates mineral and coal governance in the province and includes reclamation and post-mining plans, financial guarantees, supervision and coordination.³⁰ Qanun Number 1 of 2023 on Aceh's Environmental Protection and Management Plan adds a long-term planning instrument for integrating ecological carrying capacity into development decisions.³¹

These rules reveal a legal asymmetry. Environmental and mining law can prohibit conduct, require approvals and place restoration obligations on operators. Sustainable-finance law can require institutions to plan, manage risk and disclose. Yet neither side automatically tells a bank how to use environmental-law data during onboarding, credit approval, disbursement and monitoring. The result is a 'last mile' problem: legal facts exist, but the financing workflow does not necessarily convert them into a stop, condition, escalation or remediation decision.

C. Peti as a Regulatory Stress Test

1. Environmental harm and evidential discipline

PETI is not a single homogeneous activity. It may involve subsistence workers, organised financiers, land controllers, processors, equipment suppliers, gold traders and actors who move proceeds through formal and informal channels. Some artisanal and small-scale mining may be capable of lawful formalisation; other activity occurs in areas or through methods that cannot satisfy environmental and licensing requirements. A legal framework that treats every participant identically will misidentify both responsibility and transition needs.

The West Aceh study offers a concrete, bounded indicator of harm. Using satellite imagery and field information, Hani and co-authors reported 13,030.84 hectares of forest-cover loss from 2019 to 2024. Their allocation of observed loss included 12.8 per cent to illegal gold mining, 10.2 per cent to legal coal mining, 7.3 per cent to legal gold mining and 69.7 per cent to non-mining causes.³² Two implications follow. First, PETI is a material local stressor. Secondly, legality alone is not a proxy for environmental harmlessness: the study also associates loss with licensed mining. The proper

³⁰ Province of Aceh, Qanun Number 15 of 2013 on Mineral and Coal Mining Management, as amended by Qanun Number 15 of 2017, arts 27–28, 40, 43, 69 and 86, <https://jdih.acehprov.go.id/dih/detail/f32506e5-fc32-47fe-91f9-41f65ba12bef>.

³¹ Province of Aceh, Qanun Number 1 of 2023 on the Aceh Environmental Protection and Management Plan, <https://jdih.acehprov.go.id/dih/detail/0600888c-2282-4bea-9dc2-58254eaaef05>.

³² Hani et al, 'Monitoring Forest Cover Loss', 48–49.

screen must therefore ask both 'is it lawful?' and 'is the residual harm acceptable and managed?'

The study does not identify bank accounts, financiers or transaction chains. It cannot support an allegation that a particular Acehnese bank financed the observed sites. That evidential restraint should shape disclosure design: institutions should report location-sensitive exposure and due-diligence methodology without publishing unverified accusations. Research on Indonesian artisanal and small-scale gold mining nevertheless documents recurring risks from mercury and cyanide, unsafe working conditions, water and soil contamination, lost state revenue and weak reclamation, while also recognising the livelihoods supported by the sector.³³

2. The financial-system nexus

PPATK's 2025 strategic report supplies a different type of evidence. Nationally, it reported 27 analytical reports and two information products concerning the mining sector with analysed transactions of Rp517.47 trillion. For 2023–2025, transactions suspected of connection with PETI reached Rp185.03 trillion and turnover reached Rp992 trillion.³⁴ The figures are intelligence indicators, not judicial findings; they cover Indonesia rather than Aceh alone. Even so, their magnitude refutes the assumption that illegal mining exists wholly outside the financial system.

The anti-money-laundering regime provides tools that sustainable finance currently uses only imperfectly. Act Number 8 of 2010 defines predicate offences broadly and includes environmental and forestry crime, alongside other offences meeting the statutory threshold.³⁵ OJK Regulation Number 8 of 2023 requires financial-services providers to implement risk-based anti-money-laundering, counter-terrorist-financing and counter-proliferation programmes, including customer and beneficial-owner controls and institutional risk assessment.³⁶ Where PETI conduct or related laundering

³³ Ami A Meutia, Royke Lumowa and Masayuki Sakakibara, 'Indonesian Artisanal and Small-Scale Gold Mining—A Narrative Literature Review', *International Journal of Environmental Research and Public Health* 19, no 7 (2022): 3955, sections 3–5 and 8, <https://doi.org/10.3390/ijerph19073955>.

³⁴ PPATK, 'Catatan Capaian Strategis', section B.4(a).

³⁵ Indonesia, Act Number 8 of 2010 on the Prevention and Eradication of the Crime of Money Laundering, State Gazette 2010 Number 122, Supplement Number 5164, art 2(1), <https://peraturan.bpk.go.id/Details/38547/uu-no-8-tahun-2010>.

³⁶ Otoritas Jasa Keuangan, Regulation Number 8 of 2023 on the Implementation of Anti-Money-Laundering, Counter-Terrorist-Financing and Counter-Proliferation-Financing Programmes in the Financial Services Sector (14 June 2023), arts 3–4 and provisions on customer due diligence and beneficial ownership, <https://ojk.go.id/apu-ppt/id/peraturan/pojk/Pages/POJK-8-2023-.aspx>.

satisfies the statutory elements, these controls have legal force independent of whether a product is labelled green.

The opportunity is to connect the two systems without collapsing them. An unusual transaction is not necessarily an environmental offence; an environmentally harmful project is not necessarily money laundering. But red flags—rapid cash turnover inconsistent with profile, payments to equipment or chemical suppliers, transfers through nominees, unverified beneficial ownership, or gold sales without provenance—can trigger enhanced due diligence. Environmental licensing and geospatial data can enrich the customer-risk assessment, while PPATK information can guide sectoral supervision. The governing principle is corroboration, not automated guilt.

3. Six implementation gaps

PETI exposes six gaps. The first is a **coverage gap**. POJK 18/2023 is transaction-specific and POJK 51/2017 is institution-wide, but many enabling services—payments, trade finance, equipment finance, gold purchasing and accounts of intermediaries—may not be evaluated as one environmental value chain. A narrow focus on a labelled green loan misses the ordinary finance that can sustain a harmful activity.

The second is a substance gap. POJK 51/2017 requires environmental and social risk management, but its sanction provision is limited and its general obligations do not prescribe a high-risk mining protocol.³⁷ Institutions can therefore comply at the level of policy architecture while applying different thresholds to client-level evidence. The TKBI improves classification but does not, by itself, close this conduct gap.³⁸

The third is a data gap. Licence, environmental-approval, land-use, sanctions, reclamation-guarantee, beneficial-ownership and transaction data sit with different authorities and may use incompatible identifiers. Where data are absent, banks may substitute customer declarations; where data are inaccessible, supervisors cannot readily compare implementation. The most valuable reform may consequently be infrastructural rather than rhetorical: a verified, access-controlled data gateway that records which evidence was checked, when and by whom.

The fourth is an enforcement gap. Mining raids may stop activity temporarily without altering the financing, equipment or market structures that make it profitable. Conversely, a bank may terminate an account without

³⁷ Otoritas Jasa Keuangan, POJK 51/2017, arts 2 and 13.

³⁸ Otoritas Jasa Keuangan, *TKBI Version 3*.

notifying the competent authority or considering the risk of displacement into cash and nominees. Coordinated escalation is needed, with due-process safeguards and clear legal bases for information sharing.

The fifth is an inclusion gap. Blanket exclusion can be defensible for an unlawful project but still counterproductive as a policy for communities whose income depends on it. If transition finance is unavailable, enforcement may deepen debt, informal borrowing and dependence on illicit financiers. The answer is not to green-label PETI; it is to separate the organised beneficiaries and polluters from workers who need a lawful livelihood pathway.

The sixth is an accountability gap. Portfolio-level figures can obscure whether finance produces additional environmental benefit. Without baselines, use-of-proceeds controls, location data, outcome indicators and external assurance, institutions may count an instrument as green at origination while ignoring non-compliance or harm during its life. This is the setting in which greenwashing is not only a misleading statement but a failure of regulatory design.

D. *Fiqh Muamalah* as a Normative Bridge

1. *Harm, corruption and assistance*

Islamic legal reasoning offers more than a prohibition on interest. Qur'anic injunctions condemn corruption on earth after it has been set in order, attribute disorder on land and sea to human conduct, and require cooperation in righteousness rather than wrongdoing.³⁹ In finance, these ideas direct attention to the object, means and consequences of a transaction. A formally permissible contract cannot be evaluated in isolation from a funded activity that is unlawful, deceptive or foreseeably destructive.

The maxim *lā ḍarar wa-lā ḍirār*—there should be neither infliction nor reciprocal infliction of harm—is a foundational expression of this reasoning.⁴⁰ It supports prevention before loss occurs, proportionate restraint when risk is credible and remediation after harm. Environmental scholars working within the Islamic tradition similarly connect stewardship, balance, accountability and limits on waste to a legal-ethical discipline rather than an optional

³⁹ Qur'an 5:2, 7:56, 30:41 and 55:7–9, in M A S Abdel Haleem, trans, *The Qur'an* (Oxford: Oxford University Press, 2004).

⁴⁰ Ibn Mājah, *Sunan Ibn Mājah*, book 13, hadith 2340; Kamali, *Maqasid al-Shariah Made Simple*, 28–31. The maxim is widely received through multiple transmissions.

sentiment.⁴¹ Llewellyn's account of Islamic environmental law is especially useful because it links resource use to public rights, protected interests and institutional responsibility.⁴²

Applied to PETI, the no-harm principle has three consequences. First, a financier should not knowingly provide capital, equipment finance or transactional infrastructure that materially facilitates prohibited and harmful conduct. Secondly, due diligence is itself a legal-ethical requirement when readily available evidence would reveal the risk; deliberate ignorance cannot convert assistance into neutrality. Thirdly, remedial action should not create a fresh injustice by imposing the cost of corporate or organised wrongdoing on impoverished workers or the general public.

2. *Maṣlaḥah, maqāṣid and consequences*

The concept of *maṣlaḥah* requires an account of public benefit that is legally disciplined, evidenced and attentive to distribution. It does not permit an institution to label any profitable project beneficial. Kamali's concise formulation of *maqāṣid al-sharī'ah* emphasises the purposes of law and the protection of human welfare.⁴³ Auda's systems approach adds multidimensionality and the need to evaluate interacting consequences rather than isolated formal categories.⁴⁴ In environmental finance, those insights support a lifecycle assessment: who receives capital, which harm is avoided, who bears residual risk, and whether restoration occurs.

Contemporary Islamic environmental jurisprudence also extends protection beyond immediate private interests. Al-Qaradawi's treatment of environmental conservation locates protection of the environment within the purposes and duties of the Sharia, while Izzi Dien relates Islamic norms to community, empowerment and ecological responsibility.⁴⁵ Those sources support an interpretation of Qanun 11/2018's principles of benefit, justice, trust and sustainability as mutually reinforcing. They do not, however, supply technical emissions thresholds or licence criteria; those depend on competent scientific and public-law institutions.

⁴¹ Mawil Izzi Dien, *The Environmental Dimensions of Islam* (Cambridge: Lutterworth Press, 2000), 37–61 and 119–47.

⁴² Othman Abd-ar-Rahman Llewellyn, 'The Basis for a Discipline of Islamic Environmental Law', in Richard C Foltz, Frederick M Denny and Azizan Baharuddin, eds, *Islam and Ecology: A Bestowed Trust* (Cambridge, MA: Harvard University Press, 2003), 185–248, 203–24.

⁴³ Kamali, *Maqasid al-Shariah Made Simple*, 1–13 and 28–31.

⁴⁴ Jasser Auda, *Maqasid Al-Shariah as Philosophy of Islamic Law: A Systems Approach* (London: International Institute of Islamic Thought, 2008), 45–55 and 192–245.

⁴⁵ Yusuf al-Qaradawi, *Ri'āyat al-Bī'ah fī Sharī'at al-Islām* (Cairo: Dar al-Shuruq, 2001), 39–87; Dien, *Environmental Dimensions of Islam*, 119–47.

An outcome-oriented approach avoids two errors. The first is contractual formalism: assuming that a *murabahah* for an excavator is sustainable because the sale structure is sharia-compliant. The second is unbounded moralism: treating a contested ethical view as immediately enforceable against a regulated institution. The correct sequence is to identify the Islamic principle, locate its positive-law or contractual bridge, specify an administrable rule, and provide evidence and review. In Aceh, article 3 of Qanun 11/2018 is such a bridge; POJK 51/2017, environmental law and the contract supply additional legal vehicles.⁴⁶

3. The incorporation boundary

The distinction between *fiqh* and enacted law is a condition of legal certainty. *Fiqh* is juristic understanding; a *qanun*, statute or OJK regulation is positive law issued by a competent authority. A sharia supervisory opinion can guide an institution and may become binding through governance rules or contract, but it cannot amend a national licence or create an environmental offence. Conversely, a positive-law minimum does not exhaust an institution's ethical responsibilities where the Qanun or its own policy imposes a higher, lawful standard.

This incorporation boundary determines the institutional design. OJK should define minimum environmental-financial due diligence for regulated entities. Aceh can operationalise its sustainability principle within regional competence, connect local environmental data and condition the use of regional funds. Sharia supervisory bodies can review whether products and policies respect harm prevention, public benefit and the prohibition on assistance in wrongdoing. Environmental and mining authorities determine technical legality and compliance. Courts and authorised administrative bodies provide remedies. No single institution is competent to perform all five roles.

E. The Prevent-Transition-Restore Framework

1. Prevent: from exclusion lists to decision protocols

The prevention layer begins with a non-negotiable rule: a regulated institution must not knowingly finance, refinance or provide a deliberately structured enabling service for mining that lacks the legally required licence or environmental approval. POJK 51/2017's responsible-investment and

⁴⁶ Province of Aceh, Qanun 11/2018, arts 2–5; Otoritas Jasa Keuangan, POJK 51/2017, art 2.

environmental-risk principles provide an existing regulatory foundation, while global prudential standards show how environmental drivers can be embedded in governance, controls and credit risk.⁴⁷ Qanun 11/2018 adds a regional principle of sustainability and a prohibition on sharia-inconsistent assistance.

Legality is the floor, not the ceiling. The West Aceh evidence shows that licensed mining can also be associated with forest loss. A high-risk protocol should therefore require: verified licence and environmental-approval status; beneficial-owner identification; site coordinates matched to protected, forest and land-use data; mercury and hazardous-chemical controls; reclamation plans and guarantees; labour and community-risk assessment; provenance for gold purchases; and a history of sanctions or unresolved grievances. The level of inquiry should be proportionate to risk, but reliance on self-certification alone should not be sufficient for high-risk mining.

The protocol should govern the full financing lifecycle. Before approval, the institution records evidence and classifies residual risk. Contractual covenants then make legality, environmental compliance, traceability and reporting continuing conditions. Disbursement may be staged against verified milestones. Material breach triggers escalation: corrective action, suspension, reporting where legally required and, if cure is impossible, responsible exit. Exit is 'responsible' when it stops enabling harm while preserving evidence, complying with legal duties and avoiding conduct that frustrates remediation.

Anti-money-laundering controls should operate as a connected but distinct track. OJK Regulation 8/2023 requires risk assessment, customer due diligence and beneficial-owner controls.⁴⁸ PPATK's PETI findings justify sector-specific red flags and enhanced monitoring, but a red flag remains a trigger for inquiry rather than proof of guilt.⁴⁹ OJK, PPATK and competent environmental and mining authorities should agree a lawful escalation matrix specifying thresholds, confidentiality, feedback and due process.

Finally, prevention needs verifiable disclosure. Institutions should disclose the protocol, portfolio coverage, material exceptions, remediation status and outcome metrics without exposing protected intelligence or personal data. The emphasis should be on decision-useful information: not only the volume of 'green' finance, but the number and value of high-risk files

⁴⁷ Otoritas Jasa Keuangan, POJK 51/2017, art 2(2); Basel Committee, *Principles*, principles 1–8.

⁴⁸ Otoritas Jasa Keuangan, Regulation Number 8 of 2023, arts 3–4 and customer-due-diligence provisions.

⁴⁹ PPATK, 'Catatan Capaian Strategis', sections A and B.4(a).

screened, rejected, conditioned, suspended and restored. Disclosure scholarship supports this distinction between raw data and labels.⁵⁰

2. Transition: inclusion without laundering illegality

Enforcement and financial exclusion are not a complete transition policy. POJK 51/2017 itself recognises financial inclusion as a sustainable-finance principle.⁵¹ A transition pathway should distinguish at least three groups: organised controllers and financiers who profit from unlawful activity; operators capable of lawful formalisation in an appropriate community-mining area; and workers or households for whom mining is a livelihood of last resort. The first category calls for investigation and withdrawal of enabling finance. The latter two may require conditional formalisation, alternative livelihoods, debt relief or social protection.

Digital finance can lower access costs and improve traceability, but it can also reproduce exclusion if identity, connectivity or data requirements are poorly designed. Arner, Buckley, Zetsche and Veidt connect financial inclusion to sustainable development while emphasising enabling infrastructure.⁵² In Aceh, that infrastructure should include accessible sharia microfinance, verified digital identity, grievance mechanisms, financial literacy and market access for alternative businesses. It should not consist of an app layered over an economically non-viable livelihood project.

Sharia contracts can allocate transition capital flexibly. *Mudharabah* may fund viable enterprises where capital and management are separated; *musharakah* can share capital and risk; *qard hasan* may provide carefully targeted relief or start-up support; and leasing or sale-based structures may fund productive equipment.⁵³ The contract must fit the activity, cash flow and risk. None of these forms is environmentally virtuous by definition. Eligibility should turn on the funded use, capacity to repay without exploitation, environmental safeguards and measurable transition outcomes.

Possible sectors include agroforestry, ecological restoration services, non-mercury lawful community mining where statutory and ecological criteria are genuinely met, recycling, renewable-energy services and local value chains

⁵⁰ Steuer and Tröger, 'Role of Disclosure', 19–27 and 41–47.

⁵¹ Otoritas Jasa Keuangan, POJK 51/2017, art 2(2)(f).

⁵² Douglas W Arner, Ross P Buckley, Dirk A Zetsche and Robin Veidt, 'Sustainability, FinTech and Financial Inclusion', *European Business Organization Law Review* 21, no 1 (2020): 7–35, 8–13 and 27–31, <https://doi.org/10.1007/s40804-020-00183-y>.

⁵³ Majelis Ulama Indonesia, Dewan Syariah Nasional, Fatwa Number 07/DSN-MUI/IV/2000 on Mudharabah Financing; Fatwa Number 08/DSN-MUI/IV/2000 on Musharakah Financing; and Fatwa Number 19/DSN-MUI/IV/2001 on Al-Qardh.

compatible with Aceh's environmental plan. A transition facility should combine finance with training, offtake arrangements and a realistic income bridge. Success is not the number of contracts signed; it is sustained lawful income, reduced dependence on PETI and demonstrable environmental improvement.

Safeguards are essential. Formalisation must not become an amnesty for organised actors, a route around environmental limits or a pretext to call continued harm 'transition'. Eligibility decisions should be public in methodology, reviewable and conditioned on community participation. Where an area cannot lawfully or safely be mined, transition finance must support exit rather than cleaner extraction. The principle is inclusion in a lawful economy, not inclusion in every proposed activity.

3. Restore: liability, ring-fencing and additionality

Aceh's mining *qanun* requires reclamation and post-mining plans and financial guarantees.⁵⁴ Those obligations should remain the first source of restoration funding for damage attributable to an operator. Sustainable-finance instruments must not socialise a polluter's legal liability. Environmental law's polluter-responsibility principle and civil-remedy provisions support the same allocation.⁵⁵

There is nevertheless a legitimate role for capital-market and Islamic social-finance instruments. POJK 18/2023 permits green sukuk, sustainability sukuk and sukuk wakaf within a framework of use-of-proceeds, reporting and external review.⁵⁶ Indonesia's sovereign green-sukuk framework demonstrates the value of budget tagging, an allocation register, annual allocation and impact reporting, and independent assurance.⁵⁷ Adapted to Aceh, those controls could finance river rehabilitation, reforestation, mercury remediation, environmental monitoring and livelihood infrastructure where the expenditure is lawful and additional.

The financing structure should separate three pots. Operator liability finance consists of reclamation guarantees, security and recoverable expenditure; it cannot be discharged by philanthropic funds. Legacy or orphan-site finance addresses damage for which a responsible operator cannot

⁵⁴ Province of Aceh, Qanun 15/2013, as amended by Qanun 15/2017, arts 27–28.

⁵⁵ Indonesia, Environmental Protection and Management Act, arts 2(j), 87 and 88.

⁵⁶ Otoritas Jasa Keuangan, Regulation Number 18 of 2023, arts 2–6 and provisions on reporting, external review and sanctions.

⁵⁷ Ministry of Finance, *Green Bond and Green Sukuk Framework* (Jakarta: Ministry of Finance, 2018), 7–14, <https://api-djppr.kemenkeu.go.id/web/api/v1/media/B51F74A2-F8BF-47C7-A77F-DA48C2D33067>.

be identified or made to pay, using public or blended finance subject to recovery rights if a polluter is later found. Community-transition finance funds public goods and livelihood change, potentially combining sukuk proceeds, zakat-compatible programmes, waqf assets and concessional capital. Act Number 41 of 2004 on Waqf and POJK 18/2023 provide positive-law pathways for productive waqf structures, but fiduciary protection of the waqf purpose remains paramount.⁵⁸

Each pot needs an auditable baseline and a counterfactual. Hectares planted are not equivalent to hectares ecologically restored; funds allocated are not funds spent effectively. Metrics should include survival of vegetation, water and sediment quality, mercury reduction, land stability, biodiversity indicators, lawful-income persistence and distributional effects. Independent review should test both allocation and impact, and reports should disclose methodological limits. This is how 'additionality' becomes an evidential claim rather than promotional language.

4. Institutional allocation and accountability

The PTR framework should be implemented through a compact division of labour. OJK sets minimum due-diligence, governance and reporting requirements for regulated financial institutions and incorporates compliance into supervision. PPATK develops and updates PETI-related financial red flags and receives reports under the existing financial-intelligence regime. National and Acehese environmental and mining authorities maintain authoritative information on licences, approvals, sanctions, reclamation guarantees and site status. The Government of Aceh integrates that information into planning and the lawful use of regional funds. Financial institutions make and document customer-level decisions.

Aceh's implementing measures must remain within regional competence. They can create an environmental-data gateway, require PTR criteria for regional procurement and regional enterprises, structure Aceh-sponsored instruments, and operationalise Qanun 11/2018's sustainability principle. They should not purport to replace OJK's prudential authority or contradict national mining licences. Where a uniform bank duty is needed, Aceh should seek an OJK rule, supervisory direction or formal cooperation instrument rather than legislate beyond its competence.⁵⁹

⁵⁸ Indonesia, Act Number 41 of 2004 on Waqf, State Gazette 2004 Number 159, Supplement Number 4459; Otoritas Jasa Keuangan, Regulation Number 18 of 2023, provisions on sukuk wakaf.

⁵⁹ Indonesia, Government of Aceh Act, arts 7, 16 and 156; Indonesia, Act Number 21 of 2011 on the Financial Services Authority, as amended, arts 5–9.

Sharia supervisory bodies should conduct a dual inquiry: whether the contract complies with applicable sharia rules, and whether the institution's policy has reasonably addressed the Qanun's principles of sustainability, benefit, justice and trust. Article 48 of Qanun 11/2018 supports local sharia supervision, but technical findings should be obtained from qualified environmental experts.⁶⁰ A multidisciplinary review committee may advise on high-risk or disputed files; its membership, conflicts and reasons should be recorded.

Accountability requires remedies as well as reporting. Customers need a process to correct inaccurate licence or beneficial-ownership data. Communities need a grievance channel for site-level harm and misleading sustainability claims. Supervisors need access to the evidence behind classifications. Investors need rights when use-of-proceeds promises are breached. Public authorities need recovery mechanisms against responsible polluters. These channels should be designed around existing administrative, civil and contractual law rather than an undefined appeal to ethics.

A phased implementation is realistic. In the first year, institutions map exposure, adopt the high-risk protocol and connect verified data sources. In the second, OJK and Acehese authorities publish comparable metrics, test data exchange and launch a limited transition facility. In the third, independent evaluation measures environmental and livelihood outcomes and recommends whether rules should be tightened. The sequence permits learning without turning experimentation into an excuse for indefinite inaction.

CONCLUSION

Aceh's green-finance challenge is not a shortage of principles. National law requires sustainable finance; the TKBI supplies classification; securities regulation supports green and sustainability sukuk; environmental and mining law regulate harmful activity and reclamation; and Qanun 11/2018 expressly joins sharia finance to sustainability, benefit, justice and trust. The difficulty is that these rules operate in adjacent silos. PETI reveals the cost of that fragmentation because unlawful extraction, environmental harm, financial flows, livelihoods and restoration are parts of one system.

⁶⁰ Province of Aceh, Qanun 11/2018, art 48.

The PTR framework converts those parts into a legally ordered sequence. Prevention connects licence and environmental data to customer due diligence, transaction monitoring, covenants and escalation. Transition distinguishes organised beneficiaries from workers and finances lawful alternatives without laundering illegality through a green label. Restoration preserves polluter liability while using ring-fenced sukuk, waqf and blended finance for genuine public-benefit and legacy needs. Across all three layers, the framework replaces volume-based claims with auditable outcomes.

Fiqh muamalah strengthens this design by directing attention to harm, assistance, public benefit and consequences. Its contribution is most credible when mediated through positive law, institutional competence and evidence. Qanun 11/2018 provides an unusually clear bridge, but it does not erase the boundary between juristic reasoning and enforceable rule. The next legal step is therefore neither a symbolic declaration nor a new label. It is an OJK-compatible, Aceh-grounded protocol that assigns duties, connects data, protects due process and makes environmental results reviewable.

The article's conclusion is deliberately bounded. Existing public evidence does not prove that any named financial institution funded PETI in Aceh, and this article does not evaluate an individual portfolio. It demonstrates instead that the legal architecture can and should require institutions to find out, act on verified risk, support a just transition and preserve resources for restoration. That is the difference between green finance as a category of products and green finance as a system of accountable governance.

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