

## **Islamic Green Finance: A Systematic Literature Review on Principles, Practices, and Future Directions in Pekalongan Region**

Nur Istiqomah

Universitas Islam Negeri K.H. Abdurrahman Wahid Pekalongan, Indonesia

E-mail: nur.istiqomah@uingusdur.ac.id

### **Abstract**

Abstracts Islamic green finance represents a critical convergence of Shariah-compliant financial principles and contemporary environmental sustainability imperatives, offering faith-based solutions to ecological challenges in Muslim-majority regions. This systematic literature review examines the theoretical foundations, practical implementations, and future trajectories of Islamic green finance with specific application to small and medium-scale enterprises in Pekalongan, Indonesia, a region facing significant environmental pressures from its textile manufacturing sector. Employing qualitative methodology and PRISMA-guided systematic review protocols, this study analyzes 43 peer-reviewed articles from international accredited journals published between 2021-2025, synthesizing current scholarship across three primary domains: foundational Islamic principles, practical financial instruments, and implementation challenges. The findings reveal that Islamic green finance, grounded in Maqasid al-Shariah, Khilafah stewardship principles, and Maslahah public interest concepts, provides robust theological and practical frameworks for environmental protection. Key instruments including green sukuk, Islamic microfinance structures, and Shariah-compliant environmental banking products offer viable pathways for financing Pekalongan's batik industry transition toward sustainable production systems. Significant implementation barriers persist, including limited awareness among small business owners, insufficient institutional capacity in regional Islamic financial institutions, standardization challenges in defining "green" criteria under Islamic law, and inadequate community-level project pipelines for sustainable investments. The study recommends multi-stakeholder interventions encompassing educational initiatives, capacity-building programs for financial practitioners, development of regional green sukuk funds, and establishment of Shariah-compliant environmental rating systems tailored to local contexts, thereby advancing both environmental sustainability and Islamic economic principles in regional development frameworks.

**Keywords:** Islamic Green Finance; Shariah-Compliant Sustainability; Pekalongan Batik Industry.

## **Introduction**

The global financial landscape has witnessed a paradigmatic shift toward sustainable finance, with Islamic green finance emerging as a distinctive approach that integrates environmental stewardship with faith-based economic principles (Sunaryanti dkk. 2025). Pekalongan, known as the "City of Batik" in Central Java, faces unique environmental challenges related to textile industry waste management and water pollution (Liu dan Lai 2021), necessitating innovative financing mechanisms that align with local religious values and sustainability imperatives (Saraswaty dan Pusparini 2023). This literature review systematically examines how Islamic green finance principles can address environmental concerns while maintaining Shariah compliance in regional economic development contexts (Samudra dan Tamamudin 2025).

The research significance lies in bridging theoretical Islamic finance scholarship with practical sustainability applications in small to medium-scale enterprises (Samudra dkk. 2024), particularly relevant for Pekalongan's batik industry which requires environmentally responsible financing solutions (Pathan, Ahmed, dan Khoso 2022). This study employs a systematic literature review methodology to synthesize findings from peer-reviewed international journals, providing comprehensive insights into principles, practices, and future directions of Islamic green finance applicable to regional settings (Hermala, Sunitiyoso, dan Sudrajad 2024).

## **Methods**

This research adopts a qualitative approach utilizing systematic literature review methods to analyze secondary data from international accredited journals published between 2021 and 2025. The review protocol follows PRISMA guidelines adapted for Islamic finance studies (Billah dkk. 2024). Database searches were conducted across Scopus, Web of Science, and Google Scholar using keyword combinations including "Islamic green finance," "Shariah-compliant sustainable finance," "green sukuk," and "Islamic environmental finance."

Inclusion criteria comprised: peer-reviewed journal articles in English, publication dates between 2021-2025, focus on Islamic finance and environmental sustainability, and relevance to small-scale or regional applications. Which were screened for relevance, resulting in 43 articles for detailed analysis. Thematic analysis was employed to categorize findings into three primary domains: foundational principles, practical implementations, and future research directions (Armstrong, Calleja-Blanco, dan Torres-Vergara 2024).

## **Results**

The systematic literature review of 43 peer-reviewed articles published between 2021-2025 reveals comprehensive insights into Islamic green finance across three primary dimensions: foundational principles, practical applications, and implementation challenges. The analysis demonstrates that Islamic green finance is fundamentally grounded in Maqasid al-Shariah, which emphasizes the preservation of life, environment, and future generations as higher objectives of Islamic law. This theological foundation creates natural synergies between faith-based economic principles and contemporary sustainability goals,

distinguishing Islamic green finance from conventional sustainable finance approaches through its inherent ethical framework.

The foundational principles identified in the literature include Khilafah, which positions humans as custodians of Earth's resources and creates theological imperatives for environmental protection. The concept of Maslahah reinforces environmental responsibility by requiring financial activities to generate collective benefits rather than individual profit maximization at environmental cost. Additionally, the prohibition of activities causing harm, known as dharar, extends to environmental degradation, making pollution-intensive industries non-compliant with Shariah principles regardless of profitability (Ardianto dkk. 2024). These principles establish a robust framework that aligns Islamic finance with green economy objectives, particularly relevant for environmentally challenged regions requiring sustainable development solutions.

**Table 1. Foundational Shariah Principles in Islamic Green Finance**

Shariah Principle	Definition	Environmental Application
Maqasid al-Shariah	Higher objectives of Islamic law	Preservation of environment and future generations
Khilafah	Human stewardship of Earth	Custodianship and sustainable resource management
Maslahah	Public interest and collective benefit	Environmental protection over profit maximization
Prohibition of Dharar	Prohibition of causing harm	Exclusion of pollution-intensive industries

Regarding practical applications, the review identifies green sukuk as the most prominent Islamic green finance instrument, combining Shariah-compliant structures with environmental project financing. Indonesia's issuance of its first sovereign green sukuk in 2018 established precedent for sub-national and corporate issuances that could support regional environmental infrastructure needs. These instruments finance renewable energy projects, waste management systems, and clean water infrastructure while maintaining asset-backed requirements fundamental to Islamic finance. The analysis reveals that green sukuk structures provide viable mechanisms for large-scale environmental investments while adhering to Shariah compliance standards.

Islamic microfinance institutions have increasingly incorporated environmental criteria into lending decisions, creating accessible green finance options for small enterprises. The review highlights specific instruments including Qard al-Hassan, benevolent interest-free loans suitable for small-scale eco-friendly technology upgrades, and Mudarabah profit-sharing partnerships applicable to wastewater treatment systems and clean production initiatives. These micro-scale applications demonstrate Islamic green finance's adaptability to regional contexts and small business requirements, particularly relevant for industries such as textile manufacturing that require environmental transitions.

**Table 2. Islamic Green Finance Instruments and Applications**

Instrument	Structure	Application
Green Sukuk	Asset-backed Islamic bonds	Environmental infrastructure and renewable energy projects
Qard al-Hassan	Benevolent interest-free loans	Small-scale eco-friendly technology upgrades for batik

<b>Instrument</b>	<b>Structure</b>	<b>Application</b>
Mudarabah	Profit-sharing partnership	SMEs Wastewater treatment systems and clean production
Islamic Green Banking	ESG-integrated credit assessment	Circular economy transition in textile manufacturing

Islamic banking institutions have developed green financing products incorporating environmental impact assessments into credit evaluation processes, ensuring financed projects meet both Shariah and sustainability standards. The integration of Environmental, Social, and Governance criteria with Shariah screening creates comprehensive evaluation frameworks for sustainable investments. This dual-screening approach represents a significant advancement in Islamic finance methodology, enabling financial institutions to assess both religious compliance and environmental impact simultaneously.

Despite these theoretical and practical advancements, the review identifies significant implementation challenges. Limited awareness among small business owners and insufficient institutional infrastructure in regional settings emerge as primary barriers. Information asymmetry exists particularly in predominantly Muslim business communities that may lack understanding of available Islamic green finance instruments. Standardization issues regarding what constitutes "green" under Islamic principles require clearer regulatory frameworks and scholarly consensus to ensure consistent application across different contexts and jurisdictions.

Financial product development costs remain prohibitive for smaller Islamic financial institutions serving regional markets, limiting product diversity and accessibility. The absence of localized green project pipelines in smaller cities constrains sukuk issuance opportunities, as most green sukuk finance large-scale infrastructure rather than community-level environmental initiatives. Capacity building for Islamic finance practitioners in environmental assessment methodologies represents another critical gap requiring institutional attention and investment in human resource development.

**Table 3. Implementation Challenges and Policy Recommendations**

<b>Challenge Category</b>	<b>Specific Barriers</b>	<b>Policy Recommendations</b>
Awareness	Limited knowledge among SME owners	Educational programs and awareness campaigns
Institutional Capacity	Insufficient infrastructure in regional banks	Capacity building and technical training programs
Standardization	Unclear green certification criteria	Shariah-compliant environmental rating systems
Product Development	High costs for regional institutions	Regional green sukuk funds and tax incentives
Project Pipeline	Limited community-level green projects	Collaborative frameworks with local stakeholders

The synthesis of findings reveals that while Islamic green finance possesses strong theoretical foundations and emerging practical applications, translating these into effective regional implementations requires addressing multiple interconnected challenges. The

convergence of Shariah principles with sustainability objectives creates unique opportunities, but realizing these opportunities demands coordinated efforts across policy, institutional, and educational dimensions to overcome existing barriers and enable widespread adoption (Ahmed dkk. 2024).

### **Discussion**

The findings of this systematic literature review reveal that Islamic green finance represents more than a mere intersection of two distinct domains, rather constituting an integrated framework where religious principles and environmental imperatives reinforce one another. The theological grounding in Maqasid al-Shariah provides Islamic green finance with inherent legitimacy within Muslim communities, addressing a critical challenge faced by conventional sustainable finance initiatives that may lack cultural resonance in faith-based societies. This cultural congruence suggests that Islamic green finance could achieve higher adoption rates in predominantly Muslim regions compared to conventional green finance approaches, particularly when environmental messaging is framed within religious contexts.

The principle of Khilafah, positioning humans as environmental custodians rather than exploiters, offers a compelling counternarrative to purely profit-driven economic models that have contributed to environmental degradation. This stewardship concept aligns remarkably well with contemporary circular economy principles and sustainable development frameworks, suggesting that ancient Islamic teachings contain relevant wisdom for modern environmental challenges. The practical implication is that environmental education and awareness campaigns in Muslim-majority regions could leverage religious teachings to enhance effectiveness, potentially accelerating behavioral changes necessary for sustainability transitions (Alam dkk. 2023).

The gap between theoretical compatibility and practical implementation reveals systemic challenges requiring multi-dimensional interventions. The limited awareness identified in the literature reflects broader issues in Islamic finance education, where even basic Shariah-compliant products remain poorly understood by potential users. This knowledge deficit becomes more pronounced with specialized products like green sukuk or environmental mudarabah partnerships, suggesting that standard financial literacy programs must be supplemented with targeted education on both Islamic finance and environmental sustainability to create informed demand for green Islamic financial products.

The institutional capacity constraints identified across multiple studies point to a critical bottleneck in Islamic green finance development. Regional Islamic financial institutions, particularly in smaller cities and emerging markets, often lack the technical expertise to develop and manage sophisticated green finance products. This capacity gap encompasses multiple dimensions including environmental impact assessment capabilities, green project evaluation methodologies, and Shariah compliance verification for environmental investments. Addressing this deficit requires systematic capacity building initiatives involving collaboration between Islamic finance scholars, environmental scientists, and financial practitioners to develop integrated expertise that bridges these traditionally separate domains.

The standardization challenges highlighted in the review reflect deeper epistemological questions about defining environmental responsibility within Islamic jurisprudence. While general principles provide clear guidance against harmful activities, translating these into specific criteria for contemporary industries and technologies requires ongoing scholarly discourse and consensus building. The absence of universally accepted green certification standards in Islamic finance creates uncertainty for both issuers and investors, potentially slowing market development. Establishing authoritative Shariah-compliant environmental rating systems would reduce this uncertainty and facilitate market growth, but requires coordination among major Islamic financial authorities and standard-setting bodies globally.

The prominence of green sukuk in the literature, contrasted with limited discussion of community-level applications, reveals a scale mismatch between existing instruments and the needs of small enterprises in regional settings like Pekalongan. While sovereign and corporate green sukuk serve important functions in financing large infrastructure projects, they provide limited solutions for small batik producers needing modest capital for wastewater treatment systems or eco-friendly dyeing technologies. This gap underscores the necessity of developing scaled-down Islamic green finance instruments specifically designed for micro and small enterprises, potentially through Islamic microfinance institutions or cooperative financing models that maintain Shariah compliance while addressing grassroots environmental challenges.

The integration of ESG criteria with Shariah screening represents a significant methodological advancement with important implications for Islamic finance evolution. This dual-screening approach addresses criticisms that Islamic finance has focused excessively on form over substance, potentially allowing investments in technically Shariah-compliant but ethically questionable activities. By incorporating comprehensive environmental and social assessments alongside religious compliance checks, Islamic financial institutions can better fulfill the Maqasid al-Shariah objectives of promoting public welfare and preventing harm. Implementing such integrated assessment frameworks requires sophisticated analytical capabilities and may increase evaluation costs, creating tensions between comprehensive due diligence and financial accessibility for smaller projects.

The case of Pekalongan's batik industry illustrates both the potential and challenges of applying Islamic green finance to regional environmental problems. The batik sector's environmental issues including water pollution from dyeing processes and textile waste generation require targeted financing solutions that enable technological upgrades and process improvements. Islamic microfinance instruments like Qard al-Hassan offer interest-free capital access aligned with religious values, while profit-sharing arrangements through Mudarabah create incentive alignment between financiers and entrepreneurs for successful environmental transitions. The effectiveness of these instruments depends on complementary ecosystem development including technical assistance for clean production adoption, market development for eco-friendly batik products, and regulatory frameworks that incentivize rather than merely mandate environmental compliance.

The comparative advantage of Islamic green finance in contexts like Pekalongan lies not in superior financial engineering but in cultural alignment and values-based motivation. When environmental protection is framed as religious obligation rather than regulatory burden, business owners may demonstrate greater commitment to sustainable practices beyond minimal compliance requirements. This intrinsic motivation, combined with accessible financing through Shariah-compliant instruments, could accelerate sustainability transitions more effectively than conventional approaches relying primarily on external enforcement mechanisms. realizing this potential requires that Islamic financial institutions actively engage with environmental challenges rather than treating green finance as peripheral to core business activities.

The future trajectory of Islamic green finance will likely depend on successful demonstration projects that prove both religious authenticity and environmental effectiveness. Pekalongan could serve as a pilot location for developing and testing regionally adapted Islamic green finance models, with lessons learned informing broader applications across similar contexts. Such pilot initiatives should incorporate rigorous impact measurement for both environmental outcomes and economic viability, building evidence bases that can convince skeptical stakeholders and attract necessary investments in product development and institutional capacity building.

The policy implications emerging from this review emphasize the necessity of enabling regulatory environments that facilitate rather than constrain Islamic green finance innovation. Tax incentives for green Islamic investments, simplified approval processes for environmental sukuk issuances, and technical support for Islamic financial institutions developing green products would reduce barriers to market entry and expansion. Simultaneously, developing clear standards and certification systems would provide necessary guardrails preventing greenwashing while maintaining flexibility for contextual adaptation. The optimal regulatory approach balances standardization benefits with innovation flexibility, recognizing that Islamic green finance remains an emerging field requiring experimentation and learning.

Ultimately, Islamic green finance represents a promising but still nascent approach to addressing the intertwined challenges of environmental sustainability and economic development in Muslim-majority contexts. The strong theoretical foundations identified in this review provide solid ground for further development, while the practical challenges highlighted underscore the significant work required to translate potential into realized impact. Success will require sustained collaboration among religious scholars, financial practitioners, environmental scientists, policymakers, and business communities, working together to create integrated solutions that honor both faith principles and environmental imperatives for sustainable futures.

### **Conclusion**

This systematic literature review of 43 peer-reviewed articles demonstrates that Islamic green finance offers theoretically robust and practically viable solutions for addressing environmental challenges while maintaining cultural and religious congruence in predominantly Muslim regions. The convergence of Maqasid al-Shariah principles with

contemporary sustainability objectives creates distinctive opportunities for faith-based approaches to environmental financing that resonate with local values and motivations. The foundational Shariah principles of *Khilafah*, *Maslahah*, and prohibition of *dharar* provide theological imperatives for environmental stewardship that align seamlessly with global sustainability agendas, distinguishing Islamic green finance from conventional approaches through inherent ethical frameworks.

The practical applications identified across the literature, including green sukuk, Islamic microfinance structures, and ESG-integrated banking products, demonstrate the versatility of Islamic finance instruments in addressing diverse environmental financing needs. These instruments range from large-scale infrastructure financing through sovereign green sukuk to community-level interventions via *Qard al-Hassan* and *Mudarabah* partnerships, indicating scalability across different project magnitudes. For regional contexts like Pekalongan's batik industry, these instruments offer pathways toward sustainable production transitions that address water pollution and textile waste challenges while respecting religious values and economic realities of small and medium enterprises. Significant implementation barriers persist, requiring coordinated multi-stakeholder interventions. Limited awareness among potential users, insufficient institutional capacity in regional Islamic financial institutions, standardization challenges in defining environmental criteria under Islamic law, and inadequate community-level project pipelines constrain the translation of theoretical potential into practical impact. Addressing these barriers demands comprehensive strategies encompassing educational initiatives, capacity building programs, regulatory framework development, and collaborative ecosystem creation involving financial institutions, religious authorities, environmental agencies, and business communities.

The path forward for Islamic green finance in regional settings necessitates context-specific adaptations rather than wholesale adoption of models designed for large-scale applications. Pekalongan and similar regions require tailored instruments, simplified approval processes, technical assistance programs, and demonstration projects that prove both environmental effectiveness and economic viability. Policy support through tax incentives, regulatory facilitation, and public investment in enabling infrastructure would accelerate market development and institutional capacity building. Future research should prioritize empirical investigations measuring actual environmental and economic outcomes from Islamic green finance interventions in regional contexts, moving beyond theoretical discussions to evidence-based assessments of effectiveness. Comparative studies examining Islamic versus conventional green finance performance in similar settings would clarify unique value propositions and inform optimal deployment strategies. Additionally, research exploring the integration of digital finance technologies with Islamic green finance principles could identify innovations that enhance accessibility and reduce transaction costs for small enterprises.

Islamic green finance represents not merely a niche financial segment but a comprehensive approach integrating faith, finance, and environmental stewardship for sustainable development. As environmental urgency intensifies globally, the principles and practices of Islamic green finance offer meaningful contributions toward achieving both

ecological sustainability and economic prosperity in Muslim-majority regions. Success in regional applications like Pekalongan would provide replicable models for broader adoption, demonstrating that environmental protection and religious principles can mutually reinforce rather than conflict in pursuit of sustainable futures.

### **Acknowledgments**

The author expresses sincere gratitude to the faculty members of the Magister Ekonomi Syariah program at UIN KH. Abdurrahman Wahid Pekalongan for their continuous academic guidance and support throughout this research process. Special appreciation is extended to the library staff for facilitating access to international journal databases essential for conducting this systematic literature review. The author also acknowledges the valuable insights gained from discussions with practitioners in Pekalongan's batik industry, which enriched the contextual understanding of environmental financing challenges and opportunities in regional settings. Finally, heartfelt thanks to family members whose unwavering support and encouragement made the completion of this research possible.

### **Conflict of interests**

The author declares no conflict of interests regarding the research, authorship, and publication of this article. This systematic literature review was conducted independently without financial support or influence from any commercial entities, financial institutions, or organizations that could potentially benefit from the research findings. The author has no financial relationships, professional affiliations, or personal interests that could inappropriately bias the content, analysis, or interpretation of the literature reviewed in this study.

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