Journal of Islamic Economics Lariba
(P-ISSN 2477-4839 E-ISSN 2528-3758)
2025, Vol. 11, No. 2, 1833-1862
https://doi.org/10.20885/jielariba.vol11.iss2.art22

Reconceptualizing green sukuk through Maqashid al-Shariah for advancing sustainable development goals

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ABSTRACT

Introduction

The global pursuit of sustainable development has intensified the need for innovative financing instruments capable of addressing environmental and social challenges while remaining ethically grounded. In Muslim-majority countries, green sukuk has emerged as a promising Islamic finance instrument designed to fund environmentally friendly projects in line with Shariah principles. Despite its growing relevance, scholarly discussion on how green sukuk operationalizes maqashid al-shariah within the framework of the Sustainable Development Goals remains limited, particularly from an integrated conceptual and stakeholder-based perspective.

Objectives

This study aims to develop and analyze a green sukuk concept based on maqashid al-shariah in achieving sustainable development. Specifically, it seeks to examine the alignment between green sukuk, maqashid al-shariah, and the Sustainable Development Goals; identify priority dimensions in green sukuk development; and assess key implications for investors, governance, and public policy in the Indonesian context.

Method

The study adopts a qualitative-descriptive approach combined with an Analytic Hierarchy Process. Data were collected from secondary sources, including official green sukuk allocation and impact reports, and primary data obtained through interviews and structured questionnaires involving key stakeholders. Content analysis was used to map green sukuk–financed projects to maqashid al-shariah and Sustainable Development Goals, while the Analytic Hierarchy Process was employed to determine priority dimensions in green sukuk development.

JEL Classification:
G23, L16, O16, P34, Q56, Z12

KAUJIE Classification:
B5, H47, I14, K14, R35

ARTICLE HISTORY:

Submitted: July 2, 2025
Revised: September 19, 2025
Accepted: September 20, 2025
Published: October 30, 2025

KEYWORDS:

green finance; green sukuk; Islamic finance; Maqashid al-Shariah; stakeholder prioritization; sustainable development; sustainable development goals

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Results
The findings reveal a strong alignment between green sukuk, maqashid al-shariah, and the Sustainable Development Goals, particularly in environmental protection, social welfare, and economic resilience. Environmental and social dimensions emerge as the highest priorities, surpassing economic and governance considerations. However, the study identifies an imbalance in maqashid realization, with intellectual development receiving limited attention. Investor participation is largely driven by functional value considerations, while governance quality and transparency play a critical enabling role.

Implications
The results highlight the need for more holistic maqashid-based frameworks that integrate intellectual development, strengthen governance, and enhance sustainability reporting to improve the effectiveness and credibility of green sukuk.

Originality/Novelty
This study offers an integrated maqashid al-shariah–based conceptualization of green sukuk linked explicitly to the Sustainable Development Goals, combining content analysis with stakeholder prioritization to advance the discourse on Islamic sustainable finance.

CITATION: Izzati, A. N., Tumuyu, S. S., & Wardhana, Y. M. A. (2025). Reconceptualizing green sukuk through Maqashid al-Shariah for advancing sustainable development goals. *Journal of Islamic Economics Lariba, 11*(2), 1833-1862. https://doi.org/10.20885/jielariba.vol11.iss2.art22

INTRODUCTION

The global commitment to achieving the Sustainable Development Goals (SDGs) has intensified scrutiny of existing development trajectories and financing mechanisms. Despite broad international consensus, recent assessments indicate that progress toward the SDGs remains uneven and increasingly constrained by substantial financing gaps, particularly in developing economies. Estimates suggest that without structural reform and innovative financing, the 2030 Agenda may face significant delays (Griffiths, 2018; Lagoarde-Segot, 2020; Zhan & Santos-Paulino, 2021). These challenges underscore the urgency of mobilizing alternative financial instruments capable of addressing environmental degradation, climate change, and social inequality simultaneously. In response, sustainable finance has gained prominence as a framework that integrates environmental, social, and governance considerations into financial decision-making (Lukšić et al., 2022; Meng & Shaikh, 2023; Ziolo et al., 2019).

Within this evolving landscape, Islamic finance has emerged as a potentially powerful contributor to sustainable development, especially in Muslim-majority countries (Laldin & Djafri, 2021; Ni'mah et al., 2024; Raimi & Bamiro, 2025). Rooted in ethical principles, asset-backed financing, and risk-sharing, Islamic finance emphasizes social justice, economic equity, and moral responsibility (Andriansyah et al., 2025; Avdukić & Smolo, 2024; Khaliq, 2025; Saied et al., 2024). Scholars increasingly

argue that these characteristics align closely with the normative foundations of sustainable development (Gundogdu, 2018; Khan, 2019). Sukuk, as a central Islamic financial instrument, has been identified as a mechanism capable of supporting long-term development objectives through its linkage to real economic activities (Al Madani et al., 2020). The growing convergence between Islamic finance and sustainability discourse has encouraged exploration of instruments that can bridge Shariah principles with global development agendas.

Green sukuk represents a notable innovation at this intersection, combining Shariah-compliant financing with explicit environmental objectives. Driven by rising concerns over climate change, renewable energy needs, and responsible investment, green sukuk has been promoted as a tool to finance environmentally beneficial projects while adhering to Islamic ethical norms (Endri et al., 2022). Empirical evidence suggests that green sukuk issuance is positively associated with economic growth, social development, and financial performance (Ali et al., 2023). Moreover, green sukuk has been linked to reductions in greenhouse gas emissions over the long term, particularly as issuance volumes increase (Suriani et al., 2024). These findings highlight the potential of green sukuk to contribute meaningfully to sustainability transitions.

Despite this potential, the development of green sukuk remains constrained by structural and conceptual challenges. Globally, the volume of green sukuk issuance remains relatively small compared to conventional green bonds and other sustainable financial instruments, limiting its ability to finance large-scale environmental projects (Abdullah & Keshminder, 2022). In addition, participation by retail investors remains limited, contributing to low secondary market liquidity and constraining market depth (Ulfah et al., 2024). Beyond market-related challenges, questions persist regarding the extent to which green sukuk genuinely embodies the objectives of maqashid al-shariah, rather than merely adopting sustainability labels without substantive integration.

A general solution proposed in the literature involves embedding Islamic ethical frameworks more explicitly within sustainable finance practices. Maqashid al-shariah, which emphasizes the protection of religion, life, intellect, progeny, and wealth, provides a comprehensive normative foundation for assessing development outcomes beyond economic growth alone (Khan, 2019). Scholars argue that aligning green sukuk with Maqashid al-Shariah can ensure that environmental objectives are pursued alongside social welfare and moral accountability (Arsyi, 2024). However, operationalizing this alignment requires translating normative principles into measurable criteria, governance structures, and project selection processes that reflect holistic human development.

More specific solutions advanced by prior studies focus on strengthening governance, transparency, and reporting standards in green sukuk issuance. Research emphasizes the importance of integrating financial data with environmental impact metrics to enhance accountability and traceability (Raeni et al., 2022). The adoption of internationally recognized frameworks, such as the International Capital Market Association Green Bond Principles, has been recommended to standardize practices

and improve investor confidence (Fitrah & Soemitra, 2022). Other studies highlight the need to simplify the identification and tagging of green underlying assets to reduce informational barriers and facilitate broader market participation (Pirgaip & Arslan-Ayaydin, 2024).

In parallel, behavioral and market-oriented research underscores the role of investor motivation in shaping green sukuk development. Drawing on the Theory of Consumption Values, scholars demonstrate that investment decisions are influenced by functional, social, emotional, conditional, and epistemic values (Sheth et al., 1991; Tanrikulu, 2021). Empirical studies in Indonesia indicate that while sustainability themes attract interest, investor behavior remains largely driven by functional considerations such as returns and perceived risk (Faisal et al., 2023). Limited financial literacy regarding sustainable and Islamic finance further constrains demand, suggesting that education and awareness-building are critical for expanding green sukuk markets (Filippini et al., 2024).

Although the literature on green sukuk, maqashid al-shariah, and the SDGs has expanded in recent years, it remains fragmented. Many studies adopt either a normative Islamic perspective or a technical sustainability lens, with limited integration between ethical objectives, empirical outcomes, and stakeholder priorities. Research often emphasizes environmental and economic dimensions, while intellectual development (ḥifẓ al-ʿaql) and governance considerations receive comparatively less attention (Subhan ZA et al., 2023). Moreover, few studies employ structured decision-making methods to assess which dimensions of green sukuk development should be prioritized from a multi-stakeholder perspective.

This study aims to develop a green sukuk concept grounded explicitly in maqashid al-shariah to support the achievement of the Sustainable Development Goals in Indonesia. Focusing on government-issued green sukuk targeted at retail investors, the study integrates content analysis with the Analytic Hierarchy Process to map funded projects to maqashid objectives and identify priority development dimensions. By combining normative Islamic principles, sustainability frameworks, and stakeholder-based prioritization, this research offers a novel contribution to the literature on Islamic sustainable finance and provides policy-relevant insights for advancing green sukuk as a holistic development instrument.

LITERATURE REVIEW

Green Finance and Sustainable Development

The concept of sustainable development has increasingly shaped global economic and financial discourse, particularly following the adoption of the Sustainable Development Goals. These goals emphasize the integration of economic growth, social inclusion, and environmental protection as mutually reinforcing objectives (Blewitt, 2017; Mazza, 2021). However, scholars widely acknowledge that achieving the SDGs requires substantial financial resources that far exceed public sector capacity, especially in developing economies (Griffiths, 2018). As a result, financial systems are

increasingly expected to play an active role in reallocating capital toward sustainable activities through innovative instruments and market-based mechanisms (Khan M. R., 2021; Paetzold & Busch, 2014).

Green finance has emerged as a central response to these challenges by directing financial flows toward projects that generate measurable environmental benefits while supporting long-term economic stability. Studies highlight that green financial instruments, including green bonds and sustainability-linked assets, can reduce environmental risks, encourage technological innovation, and support climate mitigation efforts (Lukšić et al., 2022). Empirical evidence further suggests that green finance contributes to lower carbon emissions and improved environmental performance when supported by appropriate regulatory frameworks (Suriani et al., 2024).

Despite these advantages, the literature also identifies limitations in the current green finance ecosystem. Concerns persist regarding inconsistent definitions, weak impact measurement, and the risk of "greenwashing," which undermines credibility and investor trust. Scholars emphasize the need for stronger governance, transparency, and standardized reporting to ensure that green finance genuinely contributes to sustainable development rather than serving reputational or symbolic purposes (Raeni et al., 2022). These challenges underscore the importance of embedding ethical and accountability frameworks within sustainable finance instruments.

Islamic Finance and Ethical Foundations of Sustainability

Islamic finance is frequently positioned as a value-based financial system grounded in ethical principles that resonate with sustainability objectives. Rooted in Shariah law, Islamic finance emphasizes risk-sharing, asset-backed transactions, and the prohibition of speculative and exploitative practices. Scholars argue that these features inherently promote financial stability and social justice, aligning Islamic finance with the broader goals of sustainable development (Gundogdu, 2018; Khan, 2019). Consequently, Islamic finance has attracted growing attention as a complementary pathway for achieving inclusive and ethical economic growth.

The normative foundation of Islamic finance is closely linked to maqashid al-shariah, which articulates the higher objectives of Islamic law: the protection of religion, life, intellect, progeny, and wealth. These objectives provide a comprehensive ethical framework that extends beyond material prosperity to encompass human dignity, knowledge, and social cohesion. Researchers increasingly argue that maqashid al-shariah offers a holistic lens for evaluating development outcomes, making it particularly relevant to sustainability discourse (Anwar et al., 2025; Arsyi, 2024).

Nevertheless, translating maqashid al-shariah into operational financial practices remains a persistent challenge. While Islamic finance institutions frequently reference maqashid principles, empirical studies suggest that practical implementation often prioritizes financial performance over broader social and intellectual objectives. This gap has prompted calls for more systematic integration of maqashid-based indicators into Islamic financial products, governance structures, and performance assessments

(Subhan ZA et al., 2023). Such integration is considered essential for ensuring that Islamic finance fulfills its ethical promise within sustainability frameworks.

Sukuk and the Emergence of Green Sukuk

Sukuk represents one of the most prominent instruments within Islamic finance, functioning as a Shariah-compliant alternative to conventional bonds. Unlike debt-based instruments, sukuk are structured around ownership of underlying assets or projects, linking financial returns to real economic activity. This characteristic has led scholars to identify sukuk as particularly suitable for financing infrastructure and development projects that require long-term capital commitments (Al Madani et al., 2020; Naeem et al., 2023).

The introduction of green sukuk marks a significant innovation by explicitly linking sukuk issuance to environmentally beneficial projects. Green sukuk are designed to finance renewable energy, sustainable transportation, water management, and climate-resilient infrastructure while adhering to Shariah principles (Affandi & Khanifa, 2022; Campisi et al., 2018; Ebrahim et al., 2021). Empirical studies indicate that green sukuk issuance has expanded in countries such as Indonesia (Alam et al., 2023; Hariyani et al., 2020; Oktaviani et al., 2018; Suroso et al., 2022; Wibisono, 2021) and Malaysia (Abdullah & Keshminder, 2022; Keshminder et al., 2022; Liu & Lai, 2021), reflecting growing demand for Shariah-compliant sustainable investments.

Despite this growth, the scale of green sukuk remains modest relative to conventional green bonds. Scholars attribute this gap to limited investor awareness, regulatory complexity, and challenges in identifying eligible green projects (Abdullah & Keshminder, 2022). Furthermore, concerns persist regarding secondary market liquidity and the dominance of institutional over retail investors, which may constrain broader market development (Ulfah et al., 2024). These issues highlight the need for stronger conceptual and institutional support for green sukuk.

Maqashid al-Shariah and Sustainable Development Goals

An expanding body of literature explores the conceptual alignment between maqashid al-shariah and the Sustainable Development Goals. Scholars argue that both frameworks share a commitment to human well-being, equity, and environmental stewardship, albeit articulated through different normative traditions (Anwar et al., 2025). For example, the protection of life and wealth aligns with goals related to health, poverty reduction, and economic resilience, while environmental preservation supports climate action and sustainable resource management.

Empirical studies demonstrate that green sukuk–financed projects often contribute to multiple SDGs, particularly those related to clean energy, sustainable cities, and climate mitigation (Liu & Lai, 2021; Waheed, 2023). This multidimensional impact reinforces the argument that green sukuk can operationalize maqashid principles within a global development agenda. However, scholars caution that alignment at the conceptual level does not automatically translate into balanced implementation across all maqashid dimensions.

A recurring concern in the literature is the underrepresentation of intellectual development (ḥifẓ al-ʿaql) within green finance initiatives. Studies note that while environmental and economic objectives receive substantial attention, investments in education, research, and knowledge production remain limited (Arrazi, 2025; Siregar, 2025). This imbalance raises questions about the long-term sustainability of green finance, as intellectual capacity is critical for innovation, behavioral change, and informed participation in sustainable development.

Investor Behavior and Value-Based Decision Making in Green Sukuk

Understanding investor behavior is essential for assessing the viability and scalability of green sukuk markets. Drawing on the Theory of Consumption Values (Sheth et al., 1991), researchers argue that investment decisions are shaped by multiple value dimensions, including functional, social, emotional, conditional, and epistemic values (Alganad et al., 2023; Essiz & Senyuz, 2024; Goel & Singh, 2023; Tanrikulu, 2021). In the context of green sukuk, functional values such as returns and risk mitigation frequently dominate investor considerations.

Empirical studies in Indonesia reveal that while investors express positive attitudes toward sustainability, actual investment decisions remain largely driven by financial performance (Faisal et al., 2023). Social and ethical motivations play a supporting role, particularly among investors with higher awareness of environmental and Islamic values (Ulfah et al., 2024). Epistemic value, linked to knowledge and understanding of sustainable finance, is often constrained by limited financial literacy and access to information.

These findings suggest that expanding green sukuk markets requires more than product innovation alone. Scholars emphasize the importance of education, transparency, and effective communication to enhance investor confidence and elevate non-financial values in decision-making processes (Filippini et al., 2024). Without such efforts, green sukuk may struggle to attract diverse investor segments and achieve meaningful scale.

Governance, Regulation, and Impact Measurement

Governance and regulatory frameworks play a critical role in shaping the effectiveness of green sukuk. The literature consistently emphasizes that strong governance mechanisms are essential for ensuring Shariah compliance, environmental integrity, and investor trust (Keshminder et al., 2022). Transparent use-of-proceeds reporting and independent verification are widely regarded as best practices for mitigating greenwashing risks.

Regulatory studies highlight the importance of harmonizing national policies with international sustainability standards. In the Indonesian context, scholars note that regulatory consistency and alignment with global climate commitments can enhance the credibility and competitiveness of green sukuk markets (Fitrah & Soemitra, 2022). However, fragmented regulations and administrative complexity continue to pose challenges for issuers and investors alike.

Impact measurement remains another critical issue. While environmental indicators are increasingly incorporated into reporting frameworks, social and intellectual impacts are often less systematically assessed (Raeni et al., 2022). This limitation reinforces calls for more comprehensive evaluation models that reflect the multidimensional objectives of Maqashid al-Shariah and sustainable development.

Research Gap and the Significance of the Study

Although the literature on green sukuk, Islamic finance, and sustainable development has expanded rapidly, several gaps remain. Existing studies often focus on isolated dimensions, such as environmental impact, investor behavior, or Shariah compliance, without integrating these perspectives into a coherent analytical framework. Moreover, empirical research rarely employs structured decision-making tools to assess stakeholder priorities or to evaluate how different sustainability dimensions should be balanced within green sukuk development.

This study addresses these gaps by integrating maqashid al-shariah, Sustainable Development Goals, and stakeholder-based prioritization within a single analytical framework. By combining content analysis with the Analytic Hierarchy Process, the study offers a systematic and empirically grounded contribution to the literature on Islamic sustainable finance. Its findings provide both theoretical insight and practical guidance for policymakers, issuers, and investors seeking to enhance the role of green sukuk in achieving sustainable development.

METHOD

Research Design and Analytical Framework

This study adopts a qualitative–descriptive research design combined with a structured multi-criteria decision-making approach. The qualitative component is employed to explore the conceptual alignment between green sukuk, maqashid al-shariah, and the Sustainable Development Goals through systematic content analysis. This approach is appropriate given the normative and interpretive nature of maqashid-based analysis, which requires careful examination of policy documents, regulatory frameworks, and sustainability reports. Qualitative analysis enables the study to capture the ethical, social, and environmental dimensions embedded in green sukuk practices beyond purely financial indicators.

To complement the qualitative assessment, the study integrates the Analytic Hierarchy Process as a quantitative decision-support tool. AHP is used to prioritize key dimensions in green sukuk development based on stakeholder judgments. The integration of these methods allows the study to move beyond descriptive analysis by incorporating structured comparisons and consistency testing. This mixed analytical framework enhances methodological rigor while remaining aligned with the exploratory objectives of the research.

Data Sources and Data Collection Procedures

The study utilizes both primary and secondary data sources. Secondary data consist of official publications related to green sukuk issuance, including government allocation and impact reports, regulatory documents, and sustainability disclosures. These documents provide detailed information on the types of projects financed, sectoral allocations, and reported environmental and social outcomes. Such sources are essential for mapping green sukuk–funded activities to specific Sustainable Development Goals and maqashid al-shariah dimensions.

Primary data were collected through semi-structured interviews and structured questionnaires administered to selected stakeholders (see Table 1). The stakeholders include representatives from regulatory authorities, sukuk issuers, sustainability institutions, distribution partners, and academic experts in Islamic finance. These participants were selected purposively based on their expertise and direct involvement in green sukuk development. The structured questionnaire was specifically designed to support the AHP analysis, enabling respondents to perform pairwise comparisons among predefined criteria. This combination of data sources ensures triangulation and strengthens the credibility of the findings.

Table 1

Research Participants

No	Category	Institutions	Number of participants
1	Regulator	DJPPR Kemenkeu	a representative from Direktorat Pembiayaan Syariah (1 person)
2	Supervisors	KNEKS	a representative from Direktorat Jasa Keuangan Syariah (1 person)
		DSN MUI	a representative from DSN MUI (1 person)
		Seknas SDGs	1 person from Tenaga Ahli Seknas SDGs
3	Distribution partners	Sukuk distributors	a representative from banking
			a representative from non-banking
4	Academics	Lecturer SIL UI	a representative from SIL UI

Source: Author's analysis.

Content Analysis and Mapping of Maqashid al-Shariah to SDGs

Content analysis is employed to examine the alignment between green sukuk–financed projects, maqashid al-shariah, and the Sustainable Development Goals. The analysis follows a systematic procedure involving document review, coding, and thematic classification. Each green sukuk–financed project is examined to identify its primary objectives and expected outcomes. These outcomes are then mapped to relevant SDGs based on established indicators and thematic relevance.

Subsequently, the mapped SDGs are associated with corresponding maqashid al-shariah dimensions, including the protection of life, wealth, intellect, lineage, and religion. This mapping process draws on existing conceptual literature that links maqashid principles to development objectives. The analysis allows the study to assess not only whether green sukuk supports sustainability goals, but also how comprehensively it reflects the holistic ethical framework of maqashid al-shariah. This step provides the conceptual foundation for identifying imbalances or underrepresented dimensions within current green sukuk practices.

Analytic Hierarchy Process and Criteria Development

The Analytic Hierarchy Process is applied to determine priority dimensions in the development of maqashid-based green sukuk. The first step involves constructing a hierarchical decision model consisting of three main criteria: environmental and social dimensions, economic dimensions, and governance dimensions (see Table 2). These criteria are derived from both the literature on sustainable finance and insights obtained from preliminary qualitative analysis (Canco et al., 2021; Graneheim et al., 2017; Meng & Shaikh, 2023; Saaty, 1987). Each criterion is further defined to ensure clarity and shared understanding among respondents.

Stakeholders participating in the AHP exercise were asked to conduct pairwise comparisons of these criteria using a standardized scale. The comparisons reflect stakeholders' judgments regarding the relative importance of each dimension in achieving effective and credible green sukuk development. Individual responses were aggregated to generate composite priority weights. The use of AHP enables systematic incorporation of expert judgment while minimizing subjectivity through structured comparison and mathematical consistency checks (Chiarini, 2019; Munthafa & Mubarok, 2017; Tseng & Pilcher, 2019).

Table 2

References for Determining AHP Criteria

No	Development Concept	Sub-Category	Research
1	Good governance	Information transparency for governments and investors	Keshminder et al. (2019), Raeni et al. (2022), Fitrah & Soemitra (2022), and Ramadhan & Wirdyaningsih (2020)
		Facilitating the identification of green assets	Keshminder et al. (2022), Delle Foglie & Keshminder (2024), and Pirgaip & Arslan-Ayaydin (2024)
2	Environmental and Social Aspects	The relationship between Islamic finance and the Sustainable Development Goals (SDGs)	Ebrahim et al. (2021) and Fitrah & Soemitra (2022)
		Green sukuk framework	Santoso (2020), Musari (2016), Oktaviani et al. (2018), Wibisono (2021), Hariyani et al. (2020), Grahesti

No	Development Concept	Sub-Category	Research
			et al. (2022), Affandi & Khanifa (2022), and Suriani et al. (2024)
		Enhancing investor literacy and awareness	Endri et al. (2022), Ulfah et al. (2024), and Araminta et al. (2022)
3	Economy	The limited market development and low liquidity	Keshminder et al. (2019), Delle Foglie & Keshminder (2024), and Yaniza et al. (2022)
		Provision of incentives	Rozman & Azmi (2022), Delle Foglie & Keshminder (2024), and Endri et al. (2022)
		Sukuk return	Keshminder et al. (2022)
		Greenium	Pirgaip & Arslan-Ayaydin (2024)

Source: Author's analysis.

Consistency Testing and Data Analysis

A critical advantage of the Analytic Hierarchy Process is its ability to assess the consistency of respondents' judgments. Consistency ratios were calculated for each respondent and for the aggregated matrix to ensure that pairwise comparisons met accepted reliability thresholds. Only judgments with consistency ratios below the recommended threshold were included in the final analysis, ensuring the robustness of the prioritization results.

The resulting priority weights were analyzed descriptively to identify dominant dimensions and relative trade-offs among environmental, economic, and governance considerations. These findings were then interpreted in conjunction with the qualitative content analysis to provide a comprehensive understanding of green sukuk development from both normative and practical perspectives. The integration of qualitative insights and AHP results strengthens the analytical depth of the study and supports evidence-based conclusions regarding stakeholder priorities and maqashid realization.

Ethical Considerations and Methodological Limitations

Ethical considerations were addressed throughout the research process. Participation in interviews and questionnaires was voluntary, and respondents were informed of the study's academic purpose. Data were anonymized to protect confidentiality and to encourage candid responses. The study relied exclusively on publicly available documents and expert opinions, avoiding any use of sensitive or proprietary information.

Despite its methodological rigor, the study has certain limitations. The AHP analysis is based on a limited number of expert respondents, which may restrict generalizability. Additionally, content analysis relies on reported outcomes rather than independently verified impact data. Nevertheless, the chosen methodology is appropriate for exploratory and conceptual research aimed at integrating ethical frameworks with sustainable finance practice. These limitations are acknowledged and addressed through cautious interpretation of findings.

RESULTS

The Relationship Between Green Sukuk, Maqashid Shariah, and the SDGs

Investing in shariah-compliant instruments is a key component of the Islamic finance industry, aiming to foster synergy with various sectors of the shariah ecosystem, including SMEs, industry, infrastructure, education, healthcare, agriculture, Hajj and Umrah, and social welfare. This synergy indirectly promotes economic growth and equitable distribution, enhancing Gross Domestic Product (GDP). Investments in shariah instruments, such as green sukuk, align with the concept of sustainable development, which posits that economic growth alone is insufficient and must be balanced with environmental and social considerations. This concept resonates with the ideas proposed by Blewitt (2017), Mensah (2019), and Mazza (2021).

Green sukuk aligned with the objectives of Maqāṣid al-Sharīʿah in achieving the Sustainable Development Goals (SDGs) can be identified based on the nature of the projects they finance. The matrix of environmental benefits derived from green sukuk, as presented in the 2024 Green Sukuk Allocation and Impact Report, is illustrated in Figure 1. The corresponding classifications are as follows:

1) Protection of religion (ḥifẓ al-dīn)
2) Protection of life (ḥifẓ al-nafs)
3) Protection of intellect (ḥifẓ al-ʿaql)
4) Protection of progeny (ḥifẓ al-nasl)
5) Protection of wealth (ḥifẓ al-māl)

Figure 1

The Relationship Between Green Sukuk, Maqashid Shariah, and the SDGs

Green Sukuk Framework											
Dark Green								Renewable energy			
Medium to Dark								Sustinable transportation	Green tourism		
Light to Medium							Sustainable water and wastewater management	Energy efficiency			
Light Green											
No	Project	SDG 1	SDG 2	SDG 3	SDG 4	SDG 5	SDG 6	SDG 7	SDG 8	SDG 9	SDG 10
1	Flood control, urban drainage, coastal protection			b, e (dark)						b, e (dark)	

2	Development of groundwater and raw water networks	b, e (dark)				b, e (dark)
3	Management of climate change information and management of applied climate information services	b, c (dark)				
4	Development of railway connectivity infrastructure and rail services in Sumatra				b, e (medium)	b, e (medium)
5	Development of railway connectivity infrastructure and railway services in Sumatra				b, e (medium)	b, e (medium)
6	Development of railway connectivity infrastructure and urban railways in Jabodetabek				b, e (medium)	b, e (medium)
7	Development of railway connectivity infrastructure in South Sulawesi				b, e (medium)	b, e (medium)
8	Planning, development, and supervision of renewable energy and energy conservation infrastructure			b, e (medium)	b, e (medium)	b, e (medium)
9	Ecosystem rehabilitation					
10	Provision of access to adequate housing					a, b, d, e (light)
11	Provision of adequate drinking water systems		b, d (light to medium)			
12	Development of dams, lakes, and other water storage structures		b, d (light to medium)			
13	Development of dams, lakes, and other water storage structures		b, d (light to medium)			

Source: Primary data. Authors' analysis.

Figure 1 (Continued)

The Relationship Between Green Sukuk, Maqashid Shariah, and the SDGs (Continued)

Green Sukuk Framework								
Dark Green								
Medium to Dark		Sustinable transportation	Waste management		Green tourism	Green tourism		
Light to Medium						Sustainable management of natural resources on land		
Light Green		Green building			Sustainable management of natural resources on ocean			
No	Project	SDG 11	SDG 12	SDG 13	SDG 14	SDG 15	SDG 16	SDG 17
1	Flood control, urban drainage, coastal protection		b, e (dark)	b, e (dark)				
2	Development of groundwater and raw water networks		b, e (dark)	b, e (dark)				
3	Management of climate change information and management of applied climate information services			b, c (dark)				
4	Development of railway connectivity infrastructure and rail services in Sumatra	b, e (medium)		b, e (medium)				
5	Development of railway connectivity infrastructure and railway services in Sumatra	b, e (medium)		b, e (medium)				
6	Development of railway connectivity infrastructure and urban railways in Jabodetabek	b, e (medium)		b, e (medium)				
7	Development of railway connectivity infrastructure in South Sulawesi	b, e (medium)		b, e (medium)				
8	Planning, development, and supervision of renewable energy and			b, e (medium)				

	energy conservation infrastructure				
9	Ecosystem rehabilitation			b, d, e (light to medium)	b, d, e (light to medium)
10	Provision of access to adequate housing	a, b, d, e (light)	a, b, d, e (light)		
11	Provision of adequate drinking water systems			b, d (light to medium)	
12	Development of dams, lakes, and other water storage structures	b, d (light to medium)	b, d (light to medium)		
13	Development of dams, lakes, and other water storage structures	b, d (light to medium)	b, d (light to medium)		

Source: Primary data. Authors' analysis.

The financing of green sukuk projects in 2023 contributes to SDG 3: Good Health and Well-being, particularly through investments in flood control, water management, and climate change information management. These outcomes align with the ICMA dark green category and are in harmony with the maqashid shariah objectives of protecting life, intellect, and wealth. About SDG 6: Clean Water and Sanitation, the financing supports the provision of clean drinking water systems, the development of dams, and the expansion of irrigation networks. These efforts correspond to the light to medium green category and are aligned with protecting life and offspring. For SDG 7: Affordable and Clean Energy, the financing supports planning, development, and oversight of renewable energy projects. These initiatives fit within the medium green category and contribute to protecting life and wealth.

SDG 8: Decent Work and Economic Growth, and SDG 9: Industry, Innovation, and Infrastructure are both supported through the development of railway infrastructure and its connectivity. These two goals share similar funding allocations, with the main distinction in SDG 9 involving additional projects for flood control, water channel development, and the provision of affordable housing. The results of these initiatives range across categories from light to dark green, aligning with the maqashid shariah objectives of protecting religion, life, offspring, and wealth. SDG 11: Sustainable Cities and Communities is funded through projects like those under SDGs 6 and 8. The results of these projects are categorized as medium and light to medium green, aligning with most maqashid shariah goals, except for the protection of intellect. SDG 12: Responsible Consumption and Production is supported by flood control projects and the development of groundwater networks. These initiatives fall under the dark green category and align with the maqashid shariah goal of protecting life and wealth.

SDG 13: Climate Action is financed through projects like those under SDGs 3, 6, and 9, with an additional focus on ecosystem rehabilitation. The results of these efforts span all four categories, from light to dark green, and align with all five maqashid shariah objectives. SDG 15: Life on Land is supported through ecosystem rehabilitation projects,

categorized as light to medium green, in line with the maqashid shariah objectives of protecting life, offspring, and intellect. Upon reviewing, the issuance of green sukuk for these projects is aligned with all five maqashid shariah objectives, although the protection of intellect remains underrepresented. This could be improved by including projects related to education, research, and scholarships, which would contribute to safeguarding human intellect.

AHP Analysis Result

The analysis using the Analytic Hierarchy Process (AHP) method was conducted with the assistance of Expert Choice software version 11, incorporating inputs from seven (7) expert informants from stakeholders involved in green sukuk issuance. This approach aims to derive a prioritized ranking of the best strategies based on maqashid shariah for achieving sustainable development goals.

An expert informant from the Directorate of Shariah Financing at the DJPPR Ministry of Finance (Informant 1) stated that the environmental and social dimensions received the highest score, with an eigenvector or weight of 0.493, for formulating the best green sukuk strategy. The second-highest dimension was governance, with a score of 0.311. The economic dimension received the lowest score, 0.196. The consistency ratio was calculated at 0.05, less than the acceptable threshold of 0.10, indicating that the results meet the consistency requirements.

The second informant, a Head of Division at the National Committee for Islamic Economy and Finance (KNEKS), expressed a view like that of the first informant, stating that the environmental and social dimension is the most important, with a score of 0.458. The economic dimension followed closely with a score of 0.416, while the governance dimension received the lowest score of 0.126. The consistency ratio was 0.00877, well below the acceptable threshold of 0.10, indicating that the comparison matrix is consistent. In contrast, the third informant—representing the National Sharia Council of the Indonesian Ulema Council (DSN-MUI)—expressed a differing perspective, emphasizing the economic dimension's primacy over governance and environmental-social dimensions. The economic dimension was assigned the highest weight of 0.584, followed by the environmental-social dimension at 0.232, and governance at 0.184. The consistency ratio for this informant's assessment was 0.05, which also satisfies the consistency requirement ($CR < 0.10$).

The fourth informant, from PT. Mercato Digital Asia (Tanamduit) offered a different perspective than the previous informants. According to this informant, the governance dimension is the most crucial for formulating the optimal green sukuk strategy for achieving the SDGs, with a score of 0.649. The environmental and social dimension ranked second with a score of 0.279, while the economic dimension received the lowest score of 0.072. The fifth informant, from BSI Wealth Management, had a ranking like the first and second informants. The environmental and social dimension was prioritized with a weight of 0.678. The economic and governance dimensions ranked second and third, with weights of 0.179 and 0.142, respectively. The consistency ratio for this informant was 0.05, which is below the acceptable threshold of 0.10, indicating

consistency in the judgments. The sixth informant, from the Expert Team of the National Secretariat for SDGs Financing, expressed the view that all dimensions hold equal urgency in developing green sukuk. Equal weights of 0.333 were assigned to each dimension, with an inconsistency ratio of 0, meeting the consistency requirement since the ratio is below 0.10.

Finally, the seventh informant, an academic, expressed an opinion like the first and second informants. The environmental and social dimension, economic dimension, and governance dimension ranked in that order, with scores of 0.653, 0.285, and 0.062, respectively. The inconsistency ratio for this informant was 0.07, which is within the acceptable range for consistency, as it is less than 0.10.

From the pairwise comparison matrix, the priority or weight proportions of the three dimensions were determined using eigenvector calculations to identify the best alternative. Higher weight values indicate a higher priority for that dimension in decision-making. The results from the Expert Choice software indicate that the environmental and social dimension received the highest weight, 0.480 or 48%, making it the most important dimension among the alternatives.

The environmental and social dimension is the most crucial aspect in formulating the green sukuk concept based on maqashid syariah for achieving sustainable development in Indonesia, with an eigenvector or weight of 0.480 (48.0%). This is followed by the economic dimension, with an eigenvector or weight of 0.287 (28.7%), while the good governance dimension holds the lowest weight, with an eigenvector or weight of 0.233 (23.3%). Based on the aggregated AHP results from the seven informants, the consistency ratio (CI) was calculated at 0.00076, well below the threshold of 0.10, indicating that the results meet the consistency requirement.

Development of Green Sukuk Based on Stakeholders

The development of the framework for green sukuk remains feasible, but existing practices must be followed, such as the application of renewable energy and energy efficiency. The latest digital technologies, which are not yet fully integrated, could be included, although the applicable international frameworks are updated annually and must be adapted accordingly. While changes to the framework standards do not occur yearly, the most recent significant update occurred in 2021, followed by another update in 2023. The Directorate General of Islamic Financing (DJPPR) has a dedicated unit, the Subdirectorate of Analysis and Market Finance, which regularly conducts periodic studies related to green sukuk.

Green sukuk, which is deemed in alignment with maqashid shariah, initially focuses on five core aspects: protection of religion (hifzul din), life (hifzul nafs), intellect (hifzul aql), offspring (hifzul nasl), and wealth (hifzul mal). The Indonesian Shariah Council (DSN MUI) explains that, over time, scholars, including Syatibi, added another maqashid, namely hifzul bi'ah (protection of the environment). This addition emphasizes that not only human beings need to be safeguarded, but the surrounding environment that supports life as well. Ultimately, all these efforts contribute to preserving human life, as environmental balance also contributes to human well-being. The principles of green

sukuk have met the fundamental tenets of Islamic objectives, as the sukuk itself is halal. However, when a green sukuk becomes tayyib, it goes beyond merely being halal, aligning with a broader, more comprehensive approach to sustainability and ethical responsibility.

According to the National Committee for Islamic Economy and Finance (KNEKS), the Islamic financial industry performs five core functions: fund mobilization, financing, investment, protection, and financial services. These functions are synergistically integrated with the broader Islamic economic ecosystem, encompassing micro, small, and medium enterprises (MSMEs), industry, infrastructure, education, health, agriculture, pilgrimage (Hajj and Umrah), and social sectors. The integration supports two key objectives: economic growth (GDP) and economic equity. GDP is influenced by household consumption, government spending, investment, and exports, while economic equity is pursued through reducing poverty, unemployment, and promoting rural development.

An overview of green sukuk investors, based on data from distribution partner Tanamduit, indicates that the majority fall within the 25–60 age range, are domiciled in the Greater Jakarta (Jabodetabek) area, and work primarily in the private sector (64%), followed by state-owned enterprises (22%) and government institutions or retirees (14%). Enthusiasm for Sovereign Sukuk (SBSN), particularly the green sukuk series, is high due to several advantages. Green sukuk attracts interest by addressing sustainability issues while offering uniquely structured coupon payments. Also, proper asset placement and clearly defined underlying assets enhance their appeal to investors. Coupon rates and security, backed by sovereign guarantees except under extreme conditions such as state bankruptcy, are also key drivers of investor interest.

From the perspective of BSI (Bank Syariah Indonesia) as a distribution partner, most investors are from the Baby Boomer generation (over 40 years old). However, investors from Generation X and millennials are also represented. Most of these investors are employed in the private sector. Based on the regional classification by the Ministry of Finance, most investors are concentrated in the western region of Indonesia, particularly in Jakarta. While most investors are Muslim, there is also participation from non-Muslim investors. The level of enthusiasm among BSI customers is comparably high to that observed with TanamDuit, as many are already familiar with sukuk products.

BSI's sukuk sales have shown consistent annual growth in volume and number of subscribers, indicating increased customer interest in sukuk, which offer competitive profit-sharing returns and relatively low risk. In addition, government sukuk are supported by incentives and tax benefits, making them particularly attractive among BSI clients. Sukuk sales at BSI are often oversubscribed, not only for the green sukuk series but also for other series. However, non-financial benefits—such as environmental or social impact—have yet to influence investor interest or purchasing decisions significantly.

Based on TCV, investors perceive the functional value of green sukuk through the lens of competitive returns compared to other investment instruments. The social value

arises from the perception that investing in green sukuk contributes to community social empowerment. For some investors, green sukuk also fulfills an emotional value, providing intrinsic satisfaction from supporting environmentally sustainable initiatives.

The conditional value refers to context-dependent factors, such as promoting green sukuk during environmental awareness campaigns (e.g., World Environment Day), which could help foster collective consciousness. However, this strategy remains underutilized. The epistemic value, linked to knowledge acquisition, is realized when investors engage with green sukuk and gain deeper insights into sustainable finance and Islamic financial instruments. Both distribution partners report a gradual annual increase in investor awareness and knowledge related to green sukuk and other green-labeled instruments. Nevertheless, the number of informed investors remains limited, underscoring the need for more intensive financial literacy programs.

A case study from Indonesia's primary green sukuk market indicates that a greenium—the yield differential between green and conventional bonds—has not yet been observed. Greenium typically refers to a scenario where green-labeled financial instruments command a premium due to environmental attributes, often resulting in slightly lower yields than non-green equivalents due to higher associated costs. Investors focus primarily on returns in the Indonesian context, with little recognition of the green label's added value. In contrast, European investors are more willing to invest in green instruments despite marginally lower yields, with the greenium typically amounting to just a few basis points.

The Directorate General of Budget Financing and Risk Management (DJPPR) at the Indonesian Ministry of Finance is currently conducting studies on the existence and implications of greenium in the domestic market. Globally, the SDGs financing gap, initially estimated at USD 2.5 trillion, has narrowed to USD 1.5 trillion as of 2024. It is anticipated that the continued growth of sustainable investment trends, including green sukuk, will contribute to further reducing this gap and enhancing financial alignment with the Sustainable Development Goals (SDGs).

DISCUSSION

Alignment of Green Sukuk, Maqashid al-Shariah, and the SDGs

This study demonstrates that green sukuk issued by the Indonesian government exhibit a strong conceptual and functional alignment with maqashid al-shariah and the Sustainable Development Goals (SDGs). Through systematic mapping of funded projects, the findings indicate that green sukuk predominantly support objectives related to environmental protection, social welfare, and economic resilience, which correspond closely with the maqashid principles of preserving life (ḥifẓ al-nafs), property (ḥifẓ al-māl), and lineage (ḥifẓ al-nasl). This alignment confirms that green sukuk function not merely as financial instruments but as value-driven mechanisms capable of operationalizing Islamic ethical objectives within a global sustainability framework.

These findings resonate with prior studies emphasizing the compatibility between Islamic finance and sustainable development. Anwar et al. (2025) argue that Maqashid al-Shariah provides a normative foundation for integrating environmental protection into Islamic economic policy, thereby reinforcing SDG-oriented development planning. Similarly, Kholil et al. (2025) maintain that sukuk instruments can effectively advance sustainability goals when explicitly grounded in maqashid principles. Empirical evidence from Malaysia and Saudi Arabia further supports this view, showing that green sukuk have been successfully deployed to finance renewable energy, sustainable infrastructure, and climate mitigation projects aligned with SDGs 7, 11, and 13 (Liu & Lai, 2021; Waheed, 2023).

Theoretically, these findings strengthen the argument that maqashid al-shariah can serve as an indigenous ethical framework for sustainable finance rather than a symbolic overlay. Practically, the results suggest that policymakers and issuers should explicitly articulate maqashid–SDGs linkages in green sukuk frameworks to enhance legitimacy and stakeholder trust. From a policy perspective, institutionalizing maqashid-based impact reporting could position green sukuk as a distinctive Islamic contribution to global sustainable finance, while simultaneously reinforcing Indonesia's leadership in the Islamic green finance market.

Prioritization of Environmental and Social Dimensions in Green Sukuk Development

The AHP results indicate that environmental and social dimensions receive the highest priority in the development of maqashid-based green sukuk, surpassing economic and governance considerations. This hierarchy reflects stakeholder perceptions that environmental sustainability and social welfare constitute the core objectives of green sukuk, while financial returns and governance mechanisms function as enabling conditions rather than primary goals. Such prioritization underscores a normative shift away from growth-centric financial logic toward a more holistic understanding of value creation consistent with Islamic ethical finance.

This finding aligns with a growing body of literature that critiques the dominance of economic indicators in sustainability discourse. Raimi et al. (2024) and Fahrozi & Jakoto (2025) emphasize that Islamic finance inherently prioritizes social justice and environmental stewardship, consistent with maqashid al-shariah. Empirical studies on green sukuk in Indonesia similarly show that environmental impact and social equity are central to issuance strategies (Alhaq et al., 2023). Conversely, critical sustainability scholarship argues that excessive focus on economic growth often undermines ecological integrity and social outcomes (Genç et al., 2022; Hickel, 2019), reinforcing the rationale for reordering sustainability priorities.

From a theoretical standpoint, the dominance of environmental and social dimensions supports the reconceptualization of Islamic finance as a moral economy rather than a profit-maximizing system. Practically, issuers should design green sukuk portfolios that visibly prioritize high-impact environmental and social projects to align with stakeholder expectations. Policymakers, meanwhile, should recalibrate evaluation

metrics to reflect multidimensional welfare outcomes, ensuring that governance and economic indicators support—rather than dilute—the ethical objectives embedded in maqashid-based sustainable finance.

Underrepresentation of Hifz al-'Aql in Green Sukuk Financing

Despite the overall alignment between green sukuk, maqashid al-shariah, and the SDGs, this study identifies a notable underrepresentation of the intellectual dimension (ḥifẓ al-'aql). Projects financed through green sukuk rarely target education, research, or knowledge development, resulting in an imbalanced maqashid realization. This gap suggests that while environmental and material dimensions of sustainability are well addressed, the cognitive and epistemic foundations necessary for long-term sustainability remain insufficiently supported.

Existing literature corroborates this observation. Siregar (2025) highlights that regulatory and market discussions on green finance tend to marginalize educational components, focusing instead on technical compliance and environmental metrics. Anisa (2025) and Arrazi (2025) further argue that neglecting intellectual development undermines the transformative potential of maqashid-based finance, as sustainability requires informed and critically engaged stakeholders. Fahrozi & Jakoto (2025) also note the absence of robust research infrastructures and long-term data systems within Islamic green finance, limiting knowledge generation and dissemination.

Theoretically, this finding challenges the completeness of current maqashid applications in sustainable finance, calling for a more integrated hierarchy that elevates ḥifẓ al-'aql alongside environmental protection. Practically, green sukuk frameworks could be expanded to finance educational programs, sustainability research, and capacity-building initiatives. From a policy perspective, incorporating intellectual development criteria into green taxonomy standards would enhance the systemic resilience of Islamic sustainable finance and ensure that environmental gains are supported by enduring cognitive and institutional capacities.

Investor Motivation and Value-Based Investment Behavior

This study finds that investor participation in green sukuk is primarily driven by functional value considerations, particularly financial returns and perceived risk mitigation, while social and epistemic values play secondary roles. Insights from distribution partners suggest that although investors appreciate the ethical and environmental dimensions of green sukuk, these values rarely override return expectations. Limited awareness and financial literacy further constrain the influence of epistemic value on investment decisions.

These findings are consistent with empirical studies on sustainable and Islamic investment behavior. Research on the "greenium" phenomenon indicates that investors associate green instruments with long-term stability and regulatory resilience, reinforcing functional value dominance. Sukmaningrum et al.'s (2025) study of Indonesian students confirms that financial performance remains a decisive factor, even among environmentally conscious investors. However, Ulfah et al. (2024) and Faizi

et al. (2024) demonstrate that social and ethical motivations gain prominence when investors possess stronger sustainability awareness, suggesting that value hierarchies are context-dependent.

Theoretically, these results affirm the relevance of the Theory of Consumption Values (TCV) in explaining Islamic sustainable investment behavior, while highlighting the conditional nature of non-functional values. Practically, issuers and regulators should strengthen investor education to elevate epistemic and social values in decision-making. Policy interventions aimed at enhancing financial literacy and sustainability awareness could gradually rebalance investor motivations, fostering a market environment where ethical and environmental considerations carry greater weight alongside financial performance.

Policy, Regulatory, and Governance Implications for Green Sukuk Effectiveness

The findings underscore the critical role of policy coherence, regulatory clarity, and governance quality in enhancing the credibility and effectiveness of green sukuk. Stakeholders emphasize the need for standardized impact reporting, transparent asset tagging, and consistent Shariah governance to ensure that green sukuk genuinely deliver environmental and social outcomes. Weak regulatory harmonization and fragmented governance structures risk undermining investor confidence and diluting sustainability claims.

Prior research strongly supports these conclusions. Keshminder et al. (2022) highlight the importance of standardized metrics and rigorous auditing to strengthen green sukuk credibility, while Fitrah & Soemitra (2022) stress regulatory consistency as a prerequisite for global competitiveness. Iskandar & Sulaiman (2025) identify regulatory gaps as key barriers to market expansion, and Manap (2025) advocates streamlined issuance processes to encourage innovation. Collectively, these studies suggest that governance quality is not ancillary but foundational to sustainable Islamic finance.

Theoretically, robust governance operationalizes maqashid principles by translating ethical intentions into accountable practices. Practically, policymakers should develop integrated green sukuk frameworks that align Islamic finance regulations with international sustainability standards. From a policy standpoint, embedding transparency, stakeholder engagement, and standardized impact measurement within governance structures will not only enhance market trust but also position green sukuk as a credible and scalable instrument for financing sustainable development.

CONCLUSION

This study set out to examine the role of green sukuk as a maqashid al-shariah–based financing instrument for achieving Sustainable Development Goals (SDGs), with a specific focus on the Indonesian context. The findings demonstrate that green sukuk exhibits a strong normative and functional alignment with maqashid principles, particularly in advancing environmental protection, social welfare, and economic

resilience. Empirical mapping of funded projects shows that green sukuk contributes meaningfully to multiple SDGs, confirming its capacity to translate Islamic ethical values into concrete sustainability outcomes. However, the analysis also reveals uneven maqashid realization, with intellectual development (ḥifẓ al-'aql) receiving comparatively limited attention.

The discussion further highlights that stakeholders prioritize environmental and social dimensions over economic and governance considerations in green sukuk development. This hierarchy reflects a shift toward value-based finance that emphasizes collective welfare rather than narrow financial performance. At the same time, investor behavior remains largely driven by functional value, indicating that financial returns and risk perceptions continue to shape participation in green sukuk markets. Governance quality, transparency, and standardized impact reporting emerge as critical enabling factors that determine whether green sukuk can credibly fulfill its sustainability claims and maintain stakeholder trust.

Taken together, this study contributes to the existing literature by integrating maqashid al-shariah, SDGs, and stakeholder-based prioritization into a coherent analytical framework. It advances understanding of green sukuk not merely as a Shariah-compliant instrument, but as a strategic tool for sustainable development grounded in Islamic moral economy. By identifying conceptual gaps, particularly in intellectual development and governance integration, this research underscores the need for more holistic and operational maqashid-based sustainability frameworks. These insights reinforce the significance of green sukuk as both a financial and ethical innovation within Islamic sustainable finance.

Limitations of the Study

Several limitations should be acknowledged when interpreting the findings of this study. First, the analysis of green sukuk impacts relies primarily on secondary data from official allocation and impact reports. While these documents provide valuable insights into funded sectors and projected outcomes, they do not always offer comprehensive or independently verified measurements of environmental and social impacts. As a result, the study cannot fully assess the long-term or causal effects of green sukuk–financed projects on SDG indicators, particularly those related to environmental quality and social transformation.

Second, the stakeholder-based AHP analysis is constrained by a relatively small number of expert respondents. Although the selected participants represent key institutions and possess relevant expertise, their perspectives may not capture the full diversity of views across the broader Islamic finance ecosystem. In addition, the analysis of investor motivation is based on insights from distribution partners rather than direct surveys of investors. This indirect approach limits the ability to generalize behavioral findings or to examine heterogeneity across different investor groups, such as retail versus institutional investors or Muslim versus non-Muslim participants.

Recommendations for Future Research

Future research could address these limitations by employing mixed-method approaches that combine qualitative analysis with quantitative impact evaluation. Longitudinal studies using project-level data and sustainability indicators would enable more rigorous assessment of the actual environmental and social outcomes generated by green sukuk. Such approaches could strengthen causal claims and provide clearer evidence of how maqashid-based financing contributes to sustainable development over time, particularly in areas such as climate resilience, public health, and social inclusion.

Moreover, further studies should explore the integration of intellectual development (ḥifẓ al-'aql) into green sukuk frameworks, especially through education, research, and capacity-building initiatives. Direct surveys and experimental studies on investor behavior would also enhance understanding of how functional, social, and epistemic values interact in shaping sustainable investment decisions. Finally, comparative cross-country research could illuminate how different regulatory environments and governance structures influence the effectiveness of green sukuk, thereby offering policy-relevant insights for scaling Islamic sustainable finance globally.

Author Contributions

Conceptualization	A.N.I., S.S.T., & Y.M.A.W.	Resources	A.N.I., S.S.T., & Y.M.A.W.
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Formal analysis	A.N.I., S.S.T., & Y.M.A.W.	Supervision	A.N.I., S.S.T., & Y.M.A.W.
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Investigation	A.N.I., S.S.T., & Y.M.A.W.	Visualization	A.N.I., S.S.T., & Y.M.A.W.
Methodology	A.N.I., S.S.T., & Y.M.A.W.	Writing – original draft	A.N.I., S.S.T., & Y.M.A.W.
Project administration	A.N.I., S.S.T., & Y.M.A.W.	Writing – review & editing	A.N.I., S.S.T., & Y.M.A.W.

All authors have read and agreed to the published version of the manuscript.

Funding

This study received no direct funding from any institution.

Institutional Review Board Statement

The study was approved by Program Studi Ilmu Lingkungan (S2), Universitas Indonesia, Kota Adm. Jakarta Pusat, Indonesia.

Informed Consent Statement

Informed consent was not required for this study.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

Acknowledgments

The authors thank Program Studi Ilmu Lingkungan (S2), Universitas Indonesia, Kota Adm. Jakarta Pusat, Indonesia for administrative support for the research on which this article was based.

Conflicts of Interest

The authors declare no conflicts of interest.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used ChatGPT, DeepL, Grammarly, and PaperPal to translate from Bahasa Indonesia into American English and improve the clarity of the language and readability of the article. After using these tools, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article.

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