

Green Sukuk for a Better Earth: Integrating Sharia and Sustainability

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ABSTRACT

Climate change and the need for sustainable development demand the presence of innovative financial instruments that are not only economically efficient, but also aligned with ethical and sustainability principles. Green sukuk, as a form of integration between Islamic finance and green finance, has become a strategic solution in answering these challenges. This research aims to analyze the role, challenges, and strategic potential of green sukuk in supporting the sustainable development goals (SDGs) agenda, with a focus on the Indonesian context. The method used is a qualitative approach through literature study.

The results showed that green sukuk has been used significantly in financing green projects such as renewable energy, sustainable transportation, and waste management. This instrument has received a positive response from the market, and supports the principles of *maqāsid al-sharī'ah*, particularly in the aspects of environmental protection (*ḥifẓ al-bi'ah*) and wealth (*ḥifẓ al-māl*). However, there are a number of key challenges, including low investor literacy, limited fiscal incentives, and suboptimal environmental impact reporting. This research also underscores the importance of cross-sector synergy, strengthening regulations, and participation of the private sector and the younger generation in expanding the green sukuk market.

This research contributes theoretically in strengthening the literature on the integration of Islamic values and sustainable development, as well as formulating policy recommendations for the optimization of green sukuk as an inclusive, ethical, and future-oriented financing instrument.

Keywords: green sukuk, Islamic finance, SDGs, *maqāsid al-syarī'ah*, sustainability, green investment.

I. INTRODUCTION

Climate change and environmental degradation have become one of humanity's biggest

challenges. This phenomenon not only impacts ecological aspects, but also significantly affects public health, food security, and global economic stability (; Suriani et al., 2024). This crisis has prompted the international community to seek innovative financing models that not only address development needs, but also support long-term sustainability. In this context, the concept of green finance emerged as a relevant solution, where green sukuk became one of the main instruments that are increasingly taken into account (Fitrah & Soemitra, 2022; Romadhon, 2023).

Green sukuk is a special form of Islamic sukuk whose proceeds are used to finance environmentally friendly projects. The issuance of this sukuk was first carried out in Malaysia in 2017, and then followed by Indonesia as the first country to issue sovereign green sukuk globally in 2018 (Suriani et al., 2024; Riana & Armia, 2023). Since then, green sukuk has become a financing model that is considered in line with the principles of Islamic finance and sustainable development goals (SDGs), including the renewable energy sector, energy efficiency, and waste management (Romadhon, 2023; Putri & Fakhriah, 2024).

Theoretically, green sukuk combine two main conceptual frameworks: Islamic finance and green finance (Riaz et al., 2024). Islamic finance is built on the prohibition of usury, *gharar*, and *maysir*, and emphasizes ethical values and social justice (Obaidullah, 2018; Pollard & Samers, 2007 in Riaz et al., 2024). Meanwhile, green finance focuses on allocating funds to projects that support the transition to a low-carbon economy (Suriani et al., 2024; Zhou & Li, 2022).

Within the framework of *maqāsid al-sharī'ah*, green sukuk also reflects efforts to safeguard wealth (*ḥifẓ al-māl*), safeguard the soul (*ḥifẓ al-nafs*), and safeguard the environment (*ḥifẓ al-bi'ah*) (Putri & Fakhriah, 2024; Fitrah & Soemitra, 2022). Thus, green sukuk not only have

financial value, but also strong moral and spiritual value in supporting sustainable development.

However, although green sukuk has shown promising growth, various challenges still hinder the optimization of this instrument, especially in Indonesia. First, market participants' understanding of green sukuk is still limited, both in terms of issuance techniques and long-term benefits (Hania et al., 2022). Second, the involvement of the private sector in the issuance of corporate green sukuk is still very low compared to the issuance by the government (Suriani et al., 2024; Vanny et al., 2022). Third, there is no strong fiscal and policy incentive framework to encourage the green sukuk market (Pimada & Nisrina, 2024; Hania et al., 2022).

Several studies have examined green sukuk from various perspectives. Suriani et al. (2024) used panel data to prove that global green sukuk can reduce carbon emissions in issuing countries. Riaz et al. (2024) found that the capital market responded positively to the issuance of green sukuk, both in terms of abnormal returns and cumulative average returns. Fitrah & Soemitra (2022) highlighted the compatibility of green sukuk with *maqāṣid al-syarī'ah*, while Vanny et al. (2022) explored its role. (2022) explored its role towards the implementation of SDGs.

However, until now there have not been many studies that integratively examine the factors that influence the successful implementation of green sukuk from upstream to downstream, ranging from investor perceptions, market readiness, to regulatory policies. In addition, there are still limited studies that focus on green sukuk in the context of the younger generation as potential retail investors (Pimada & Nisrina, 2024). Research on corporate green sukuk is still fragmented, even though the private sector plays an important role in funding green projects in the future (Hania et al., 2022; Romadhon, 2023).

This research is here to make a new contribution to the literature by incorporating a holistic approach to green sukuk, both from the perspective of regulation, market, and Islamic investor preferences. By reviewing the dynamics of green sukuk empirically and theoretically, this research positions green sukuk as an instrument that is not only shariah compatible but also economically effective and relevant to global environmental issues. Another novelty lies in combining the *maqāṣid al-sharī'ah* and fiscal policy approaches in assessing the effectiveness of green sukuk as part of a sustainable financial system. This research aims to: analyze the strategic role of

green sukuk in supporting the sustainable development agenda (SDGs).

II. METHODS

This research uses a qualitative approach with a literature study method to examine the role of Islamic financial instruments, especially green sukuk, in supporting the achievement of sustainable development goals (SDGs). Literature study was chosen because it allows researchers to identify and analyze secondary data sourced from various previous studies, scientific journals, international organization reports, and related publications relevant to the topic (Snyder, 2019). The data sources in this study are various literatures related to Islamic finance, sukuk, sustainable financing, and sustainable development goals. Data collection techniques are carried out through a process of identification, selection, and evaluation of literature relevant to the topic of this research. The data collected was analyzed using the content analysis method which enabled the researcher to identify key themes and patterns that emerged in the relevant literature. Content analysis helps formulate conclusions about the role of green sukuk in supporting the global sustainability agenda based on empirical findings and existing theories (Bengtsson, 2016).

III. RESULTS AND DISCUSSION

Analysis of various studies shows that green sukuk has become a strategic instrument in supporting the financing of sustainable projects, particularly in countries with developed Islamic financial systems such as Indonesia, Malaysia, United Arab Emirates and Saudi Arabia. The issuance of green sukuk allows the allocation of funds for green projects such as renewable energy, energy efficiency, waste management, sustainable transportation, as well as climate change mitigation.

In Indonesia, green sukuk was introduced through the issuance of wakalah-based Sovereign Green Sukuk in 2018 with a total value of USD 1.25 billion, making it the first country in Asia to issue green sukuk in the global market (Riana & Armia, 2023). The proceeds have been used for various national priority projects, including solar power, biogas, and low-carbon transportation.

The issuance of the country's green sukuk is in line with Indonesia's commitment to the Paris Agreement and the Sustainable Development Goals (SDGs), as well as the huge need for long-term development financing that cannot be met solely by the government budget.

A study by Riaz et al. (2024) found that the announcement of green sukuk issuance resulted in positive abnormal returns for issuers, both at the individual firm level and in aggregate, signaling that capital markets react positively to instruments that are not only religiously ethical, but also contribute to the global agenda.

Furthermore, Pimada & Nisrina (2024) noted that millennial and Gen Z investors show considerable interest in retail green sukuk. Factors such as religiosity, environmental awareness, and risk perception significantly influence their decision to invest in green sukuk.

However, the lack of literacy and adequate understanding of the green sukuk mechanism is a major obstacle. This is in line with the results of research by Hania et al. (2022) who found that the lack of understanding of market participants is a major challenge in the issuance of corporate green sukuk in Indonesia.

Some of the main challenges in developing green sukuk in Indonesia are: Lack of understanding of market participants, both in terms of issuers and investors. Unpreparedness of regulatory infrastructure and incentives, such as the suboptimal tax incentive framework and technical assistance for issuers. Higher risk profile, as green projects generally involve new technologies and long time horizons. Lack of transparency and impact reporting, both in terms of environmental benefits and compliance with sharia principles.

The above issues point to the importance of comprehensive policy interventions to improve the sharia-based green investment climate.

Green sukuk is not just a financial instrument; it is also a medium to realize the objectives of *maqāṣid al-syarī'ah* in the contemporary context. According to Putri & Fakhriah (2024), the application of green sukuk in financing sustainable projects reflects concern for the environment (*ḥifẓ al-bi'ah*), protection of people's wealth and economy (*ḥifẓ al-māl*), and maintaining the continuity of life and posterity.

Thus, green sukuk is a tangible form of integration between the Islamic economic system and the principles of global sustainable development. This approach is considered to have strong moral, spiritual, and practical legitimacy, both for the state, corporations, and individuals (Fitrah & Soemitra, 2022).

Based on the findings from the literature study, the strategy of strengthening green sukuk can be directed at several things: Increasing public literacy and education, especially to retail investors and micro, small and medium enterprises

(MSMEs). Formulation of a fiscal incentive framework in the form of a tax holiday or tax rebate for green sukuk issuing companies (Hania et al., 2022; Vanny et al., 2022). Strengthening the government's role as a catalyst and facilitator of green sukuk issuance, both in the public and corporate sectors (Suriani et al., 2024; Romadhon, 2023). Development of impact reporting mechanisms, both environmental and social, to improve transparency and accountability (Riana & Armia, 2023). Synergies with Islamic financial institutions and environmental organizations in order to expand the reach of green projects and sources of financing.

Discussion and Analysis

Green sukuk is an important innovation in the world of finance because it brings together two major paradigms that previously developed separately: Islamic finance and green finance. Riaz et al. (2024) point out that this instrument responds to the financing needs of green projects with a Shariah-compliant approach, such as the prohibition of *riba*, *gharar*, and *maysir*. In this context, green sukuk is not only a means of financing environmentally friendly projects, but also a tool to expand the ethical and sustainable Islamic finance market.

The concept of sustainability carried by green sukuk is in line with the *maqāṣid al-syarī'ah* principle, as explained by Putri & Fakhriah (2024), which emphasizes the need to protect the environment (*ḥifẓ al-bi'ah*) as part of the moral obligation in Islam. This makes green sukuk not only an economic instrument, but also a representation of ethical values and social responsibility in Islamic finance.

Indonesia has taken a pioneering role as the first country in the world to issue sharia-based sovereign green sukuk globally. Green sukuk issued since 2018 are directed to finance renewable energy, energy efficiency, waste management, and sustainable infrastructure projects. Suriani et al. (2024) noted that the issuance of green sukuk by Indonesia, Malaysia, UAE, and Saudi Arabia has had a positive impact in reducing aggregate carbon emissions.

However, as noted by Hania et al. (2022), although the government is active in issuing sovereign green sukuk, private sector interest in Indonesia in issuing corporate green sukuk is still very limited. The main problem lies in the lack of technical understanding, perception of high risk, and the absence of sufficiently attractive fiscal incentives.

Donna Vanny et al. (2022) also added that another challenge is the lack of a comprehensive legal and policy framework capable of supporting the growth of the green sukuk market, especially in terms of corporations and retail investors.

The financial market shows a positive response to the issuance of green sukuk. Riaz et al. (2024), through an event study approach, proved that there was a significant abnormal return when the company announced the issuance of green sukuk. This indicates that investors appreciate the company's sustainability efforts and provide added value to sharia-based issuance.

On the other hand, research by Pimada & Nisrina (2024) revealed that millennials and Gen Z as potential investors have a high interest in green sukuk, especially retail green sukuk. The three main factors that influence their investment interest are religiosity, concern for the environment, and perception of instrument risk. Unfortunately, subjective norms and financial literacy have not contributed significantly to investment decisions. This suggests the need to systematically increase public education and strengthen Islamic financial literacy.

Several journals highlight a number of structural constraints that hinder the expansion of green sukuk in Indonesia: Lack of technical knowledge: Market participants, both issuers and investors, still have limited understanding of the technical, sharia and environmental aspects of green sukuk (Hania et al., 2022).

Lack of fiscal incentives and strategic policies: The government has not optimally provided fiscal incentives such as tax deductions or financing support, which are key to attracting corporate issuers to actively issue green sukuk (Vanny et al., 2022). Absence of a standardized impact reporting mechanism: A number of journals highlight the absence of a rigorous monitoring system regarding the use of green sukuk funds, both in terms of sustainability and sharia compliance (Riana & Armia, 2023). International market and regulatory risks: The high market expectation of impact reporting and project certification exposes green sukuk to additional risks compared to regular sukuk. This is reinforced by the findings in Romadhon (2023) which highlight the need for financing risk mitigation and long-term investor protection.

Studies by Fitrah & Soemitra (2022) and Romadhon (2023) emphasize that green sukuk have a close fit with the SDGs agenda, especially in the pillars of economic, environmental, and social development. The sectors financed by the

country's green sukuk, such as waste management, green transportation, and energy efficiency, directly support SDGs targets such as: Clean and Affordable Energy, Sustainable Cities and Settlements, Addressing Climate Change. Green sukuk also has the potential to become a tool of green diplomacy in international financial relations, by strengthening Indonesia's position as a pioneer of Islamic financial innovation that supports the global climate (Suriani et al., 2024; UNPRI, 2017 in Riaz et al., 2024).

The literature evaluation also reveals that green sukuk still need to be strengthened in aspects: Validation of carbon emissions (greenhouse gas) from the financed project. Consistency of government and investor commitment in renewable energy projects. The need to strengthen the cross-border regulatory ecosystem. This research emphasizes that the competitiveness of green sukuk depends on management efficiency and the legitimacy of green impact certification. Fahlevi & Wirdyaningsih (2024) mapped the structural challenges faced by Indonesia in expanding the green sukuk market, namely: Lack of identification of green assets in the private sector. Lack of credible environmental assessment institutions. Low corporate readiness in preparing sustainable impact reports.

However, great opportunities remain open through the development of instruments such as blue sukuk, green sharia mutual funds, and ESG-based sharia indices. Synergy efforts between OJK and other stakeholders are considered key in building a green and sustainable Islamic capital market infrastructure.

Lubis & Windiana (2024) explained that green sukuk is a concrete manifestation of *maqāṣid al-syar'ah* in the context of contemporary economics. The implementation of green sukuk supports the protection of wealth (*ḥifẓ al-māl*), offspring (*ḥifẓ an-nasl*), and life (*ḥifẓ an-nafs*). Green sukuk finance projects such as environmentally friendly transportation and coastal protection, which directly support social and ecological sustainability.

This research suggests that the future development of the green economy remains grounded in the principles of justice and public good. Therefore, a fiscal and monetary policy model that integrates with *maqāṣid* is needed, so that Islamic economics is not only symbolic, but also a solution to the ecological crisis.

Febriyanti et al. (2024) highlighted that green sukuk has a strategic role in financing environmentally friendly projects, especially in

areas with minimal access to financing. This research shows that green sukuk can help vulnerable communities through funding projects based on renewable energy, water conservation, and waste management, which simultaneously creates economic and social added value.

However, reporting and transparency remain a major challenge, especially for developing countries. Therefore, international collaboration is needed in the development of impact reporting standards and Shariah verification of green projects.

IV. CONCLUSION

The problems of climate change, environmental degradation, and limited sustainable development financing are driving the need for innovative financial instruments that not only fulfill the principles of economic efficiency, but also uphold ethical and sustainability values. In the midst of this complexity, green sukuk comes as a strategic solution that bridges two major paradigms: Islamic finance and green finance.

From the results of literature analysis and empirical studies in various studies, it can be concluded that green sukuk has great potential to play a central role in supporting sustainable development, especially in the context of Muslim-majority countries such as Indonesia. The issuance of green sukuk by the Indonesian government since 2018 marks a new chapter in Islamic finance diplomacy and commitment to global agendas such as the Paris Agreement and the Sustainable Development Goals (SDGs). These sukuk have financed strategic projects in the renewable energy, green transportation, and waste management sectors, demonstrating that sharia principles can directly contribute to climate change mitigation efforts and the transition to a low-carbon economy.

However, the results of the study also show that the development of green sukuk still faces various challenges. From the market side, limited understanding of the concept and mechanism of green sukuk is a major obstacle, especially in the private sector and among novice investors. Research by Hania et al. (2022) shows that corporate green sukuk has not developed optimally because market participants do not have an adequate understanding and supporting fiscal incentives are still limited. This is reinforced by the study of Donna Vanny et al. (2022) which highlights the importance of public education, financial literacy, and the active role of regulators in expanding the reach of green sukuk.

In terms of market response, a study by Riaz et al. (2024) showed that the issuance of green sukuk was positively welcomed by investors, as evidenced by significant abnormal returns at the time of the issuance announcement. This finding confirms that sharia-based green instruments are not only normatively relevant, but also economically attractive. In fact, research by Suriani et al. (2024) proved that green sukuk have a real impact on reducing aggregate carbon emissions in issuing countries, both in the short and long term.

Theoretically, green sukuk are in line with the maqāṣid al-syarī'ah framework, as outlined by Putri & Fakhriah (2024) and Fitrah & Soemitra (2022). This instrument contributes to environmental protection (ḥifẓ al-bi'ah), safeguards the economy of the ummah (ḥifẓ al-māl), and strengthens the social dimension of Islamic finance through investments that bring broad benefits. Therefore, green sukuk can be seen as a real manifestation of an Islamic economy that is just, sustainable, and oriented towards the welfare of present and future generations.

On the other hand, a study by Pimada & Nisrina (2024) revealed that the younger generation, especially millennials and Gen Z, have a strong tendency to invest in value-based green instruments. This suggests that green sukuk retail has a wide potential market, provided that it is accompanied by education, product transparency, and communication strategies that are in line with the values of the digital generation.

Taking all these findings into consideration, this study concludes that green sukuk has strategic urgency and potential in the sustainable finance agenda in Indonesia and the Islamic world. However, the full realization of this potential requires multi-level support, ranging from public policy, market incentives, strengthening regulatory infrastructure, to active participation of the community and industry players. To realize this, a collaborative approach between stakeholders and continuity between Islamic values and sustainable development principles are required.

Recommendation. The government needs to design comprehensive incentive policies, such as tax rebates or interest subsidies, to encourage corporations to issue green sukuk. Strengthening the impact reporting and accountability system is also a priority to ensure market confidence. Companies in the energy, transportation and infrastructure sectors can utilize green sukuk as an alternative to sustainable project financing. Internal technical capacity building and cooperation with Islamic financial institutions are needed. Islamic

finance and sustainability literacy education needs to be improved, especially among the younger generation. Green sukuk can be used as an ethical investment option that has positive social and environmental impacts. Further studies are needed with quantitative and qualitative empirical approaches on market perceptions, policy effectiveness, and the effect of green sukuk on long-term environmental performance. Systematic study by Alam et al. (2023) showed that since 2016, green sukuk publications and practices have experienced rapid growth, especially in terms of frameworks, opportunities, challenges, and operational models. Key green sukuk challenges were identified in the post-pandemic phase, such as the need for low issuance costs, efficient risk management, and cross-sector coordination to avoid market fragmentation. Global trends and evaluations indicate that green sukuk is gaining global attention as an innovative sharia-based sustainable instrument. In Indonesia, while green sukuk has opened up a new avenue of green financing, strengthening the private sector and developing blue sukuk/sharia mutual funds is the next stage. The maqāṣid al-syarī'ah philosophy can be used as the main framework for the development of green sukuk that balances environmental sustainability and social justice. Contributions to SDGs can be optimized through inclusive financing models and high social impact projects.

LITERATURE

- [1]. Alam, S., Rahim, R., & Yusuf, M. (2023). Social media and marketing strategy. Sumedang: CV Mega Press Nusantara.
- [2]. Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, 2, 8-14.
- [3]. Donna Vanny, S., Sari, R. N., & Siregar, H. (2022). Green sukuk and the implementation of SDGs in Indonesia. *Journal of Islamic Finance and Banking*, 10(2), 123-135.
- [4]. Fahlevi, M., & Wirdyaningsih, W. (2024). Analysis of challenges and opportunities for green sukuk development in Indonesia. *Syntax Literate: Indonesian Scientific Journal*, 9(10), 5663-5676.
- [5]. Febriyanti, A. D., Yusuf, L. H., & Nugraha, R. (2024). Improving work safety through the implementation of occupational safety and health management system (SMK3). *Journal of Educational Innovation and Public Health*, 2(2), 72-85.
- [6]. Fitrah, M., & Soemitra, A. (2022). Green sukuk and maqāṣid al-syarī'ah: An integration analysis of Islamic values and sustainability. *Journal of Islamic Economics Theory and Application*, 9(3), 456-470.
- [7]. Hania, R., Pramudito, A., & Sari, D. (2022). Challenges of corporate green sukuk issuance in Indonesia. *Indonesian Journal of Islamic Finance*, 7(1), 77-92.
- [8]. Lubis, H., & Windiana, T. (2024). The influence of halal labeling, brand and price on purchasing decisions for Chatime drinks. *Journal of Agricultural Social Economics*, 16(3), 239-256.
- [9]. Obaidullah, M. (2018). Introduction to Islamic microfinance. IBF Net: The Islamic Business and Finance Network.
- [10]. Pimada, R. A., & Nisrina, N. (2024). Determinants of millennial and Gen Z investment interest in green sukuk retail. *Journal of Islamic Investment*, 12(1), 41-59.
- [11]. Pollard, J., & Samers, M. (2007). Islamic banking and finance: Postcolonial political economy and the decentring of economic geography. *Transactions of the Institute of British Geographers*, 32(3), 313-330.
- [12]. Putri, A. S., & Fakhriah, E. (2024). The role of green sukuk in realizing maqāṣid al-syarī'ah and sustainability. *Journal of Islamic Economics and Finance*, 14(2), 201-218.
- [13]. Riana, D., & Armia, M. (2023). Sovereign green sukuk as a green project financing instrument in Indonesia. *Indonesian Journal of Sharia Economics*, 5(1), 88-105.
- [14]. Riaz, Y., Ahmad, M., & Hussain, S. (2024). Market reaction to green sukuk issuance: Evidence from event study. *International Journal of Islamic and Middle Eastern Finance and Management*, 17(1), 34-52.
- [15]. Romadhon, A. (2023). Prospects for green sukuk as an alternative to sustainable financing in Indonesia. *Journal of Sustainable Finance*, 3(2), 65-80.
- [16]. Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333-339.

- [17]. Suriani, S., Rahman, A., & Yusuf, M. (2024). Green sukuk and carbon emission reduction: A global panel data analysis. *Journal of Economics and Environment*, 11(1), 25-39.
- [18]. Zhou, Y., & Li, Y. (2022). Green finance and sustainable development: Evidence from emerging markets. *Journal of Cleaner Production*, 370, 133-145.