Maqasid al-Shariah and Sustainable Finance: Analyzing the Impact of Green Sukuk Allocation in Indonesia

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Abstract
This research paper examines the application of Maqasid al-Shariah principles in the context of sustainable finance, focusing on the impact of Green Sukuk Allocation in Indonesia. As an Islamic financial instrument, Green Sukuk aims to raise funds for environmentally friendly projects while adhering to Shariah principles. This study analyzes the 2023 Green Sukuk Allocation and Impact Report from the Indonesian Ministry of Finance to assess the impact of Green Sukuk in achieving both financial and sustainable development goals. Using a qualitative approach, this paper evaluates how the allocation of green sukuk funds aligns with the objectives of Maqasid al-Shariah, particularly in the preservation of the environment and the promotion of social welfare. The analysis also considers the challenges and opportunities faced in implementing green sukuk as a sustainable financing mechanism. This research finds that the implementation of green sukuk financing in Indonesia aligns with the five essential principles of Maqasid al-Shariah, namely hifz al-deen (preservation of religion), hifz al-nafs (preservation of life), hifz al-aql (preservation of intellect), hifz al-maal (preservation of wealth), and hifz al-nasl (preservation of lineage). Moreover, the implementation of green sukuk financing has also positively impacted multiple sectors in Indonesia. The findings of this study have important implications for policymakers, financial institutions, and investors seeking to promote sustainable development through Islamic finance instruments. The study's insights can inform the design of future green finance policies and strategies, highlighting the role of Islamic finance in achieving both financial and sustainability goals.

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1. Introduction

Indonesia, with its diverse natural resources and extensive coastline, is particularly vulnerable to the adverse effects of climate change. Recognizing its role as a responsible member of the global community, Indonesia has undertaken various initiatives to mitigate and adapt to climate change, aiming for a future that is low in carbon emissions and resilient to climate impacts. One significant initiative is the issuance of green sukuk, which aligns with the country's commitment to sustainable development and climate action (Musari, 2021). By ratifying the Paris Agreement in 2016 and submitting its Nationally Determined Contributions, Indonesia has demonstrated its commitment to reducing greenhouse gas emissions and building climate resilience (Musari & Hidayat, 2023).

Alam *et al*. (2016) argue that green sukuk represents a Shariah-compliant investment in renewable energy and other environmentally friendly assets, addressing Shariah's concern for environmental protection. The funds raised from green sukuk can be utilized for the construction or financing of projects, including those supported by government green subsidies. The green sukuk structure involves securitizing future income cash flows from projects or assets meeting specific green criteria. These funds are predominantly allocated to Shariah-compliant green projects.

In 2024, Indonesia celebrates its sixth year of issuing green sukuk, a practice that began in 2018. As reported by the Indonesian Ministry of Finance, the total issuance value of green sukuk reached USD 6.9 billion in 2022, establishing Indonesia as the world's leading issuer of green sukuk and a pioneer in the sovereign green sukuk market (Ministry of Finance, 2023). Given this context, it is imperative to scrutinize the performance of green sukuk in Indonesia, examining its adherence to the principles of Maqasid al-Shariah and its contributions to addressing climate change challenges. This study seeks to analyze the alignment between the allocation of green sukuk issued by the Indonesian government and the principles of Maqasid al-Shariah. This investigation is crucial, as neglecting Maqasid al-Shariah and Maslahah could undermine the intrinsic value of Islamic financial products, rendering them unsuitable for the global market (Wahab and Naim, 2020). Furthermore, the study will assess the impact of implementing these green sukuk, as well as the challenges and opportunities associated with using them as a sustainable financing mechanism.

The article follows a structured approach. Firstly, a literature review related to green sukuk will be presented to identify the research gap. Secondly, the

methodology employed in this study will be described. Thirdly, an analysis of the alignment between the implementation of green sukuk in Indonesia and the principles of Maqasid al-Shariah will be conducted. Fourthly, the impact of green sukuk allocation in Indonesia will be examined. Fifthly, the challenges and opportunities of implementing green sukuk will be analyzed. Finally, a conclusion will be drawn based on the discussions above.

2. Literature Review

Some academic works approach green sukuk from a theoretical standpoint. For example, Moghul and Safar-Aly (2015) explore the introduction of Islamic environmental ethics to contemporary Islamic finance through green sukuk. El Amri *et al*. (2021) examine how the structure of green sukuk contributes to the Sustainable Development Goals (SDGs). Additionally, several studies have conducted literature reviews on green sukuk. For instance, Ulfah *et al*. (2023) conducted a literature review on the implications of green sukuk for government policy and future studies. Alam *et al*. (2023) conducted a systematic review on the development and evaluation of green sukuk, while Almutairi (2023) conducted a systematic review on green sukuk after the Paris Agreement.

Other studies have focused on analyzing the challenges and opportunities of implementing green sukuk. For instance, Alam *et al*. (2016) explored the potential of green sukuk in major Islamic finance markets. Rahman *et al*. (2022) examined the challenges of Green Sukuk policy implementation for achieving environmental sustainability in Malaysia, Indonesia, Saudi Arabia, and the United Arab Emirates. Endri *et al*. (2022) highlighted renewable energy as a potential area for financing with green corporate Sukuk, citing a lack of understanding among market participants as a key issue. Additionally, Malahayati & Anggraeni (2023) studied the potential and challenges of green Sukuk for financing the green economic recovery in Indonesia.

Specifically, Musari & Hidayat (2023) researched the role of green sukuk in Maqasid al-Shariah and the SDGs in the Indonesian context. But their conclusion can be considered too general, as they state by preserving the environment, the other five principles of Maqasid al-Shariah will also be automatically preserved. This study analyze in detail the relationship of each Maqasid al-Shariah principle with the implementation of green sukuk in Indonesia based on the 2023 Green Sukuk Allocation and Impact Report from the Ministry of Finance of the Republic of Indonesia.

To sum up, this study distinguishes itself from current literature by evaluating the degree of alignment between the implementation of green sukuk in a specific country, Indonesia, and the principles of Maqasid al-Shariah. Furthermore, it assesses the impact of green sukuk implementation in Indonesia, alongside an investigation into the challenges and opportunities related to its adoption in Indonesia.

3. Method

In this study, a combination of document analysis and literature review will be used to evaluate how the allocation of green sukuk funds aligns with the objectives of Maqasid al-Shariah and to assess the impact of green sukuk in Indonesia. Using the document analysis method, the study analyzes the Green Sukuk Allocation and Impact Report 2023 to extract relevant information about the allocation and impact of green sukuk in Indonesia.

Furthermore, using the literature review method, the study will compare the information from the Green Sukuk Allocation and Impact Report with information from other sources to gain a broader understanding of the topic and identify any gaps or areas for further research. Morandi and Camargo (2015) assert that a systematic literature review offers significant benefits to researchers. They note that individual studies may exhibit shortcomings in design, conduct, or reporting, and even well-conducted studies may produce atypical results or have limited relevance. Therefore, decisions should ideally be based on a broad range of studies, including all relevant ones, rather than on individual or a limited set of studies. Systematic reviews provide a comprehensive and robust overview, enabling researchers to stay informed about the existing body of knowledge in their areas of interest.

To evaluate the effectiveness of green sukuk in addressing social and environmental challenges, this study will also compare the implementation of green sukuk financing in Indonesia with the social foundation frameworks proposed by Raworth (2017) in her book Doughnut Economics. Raworth outlines a social foundation, emphasizing the essential aspects of life that no individual should lack. These twelve basics include sufficient nourishment, uncontaminated water and proper sanitation, the availability of energy and hygienic cooking facilities, education, healthcare, suitable housing, a minimum income and satisfactory employment, as well as access to information and social support networks. Additionally, the framework advocates achieving these essentials through gender

equality, social equity, political voice, and peace and justice. These components align with the SDGs.

4. Results and Discussion

4.1. Maqasid al-Shariah and Green Sukuk Allocation

This section aims to provide a comprehensive analysis of the degree to which the implementation of green sukuk by the Indonesian government aligns with Maqasid al-Shariah. In the Arabic language, maqasid is the plural form of maqsid, which encompasses meanings such as purpose, intent, objective, principle, goal, or end (Ibn Ashur, 2006). Terminologically, Allal Al-Fassi (1993) defines Maqasid al-Shariah as the purposes and hidden wisdoms embedded in each of the Shariah's rulings. Al-Raisouni (1999) considers Maqasid al-Shariah to be the targeted goals, outcomes, and benefits sought by the establishment of Shariah as a whole and the detailed regulations within it. Additionally, al-Fāssi (1993) posits that the overarching objective of Islamic law is the development of the earth, the preservation of its ecosystem, the continuity of its well-being, and ensuring its prosperity for future generations. These foundational principles indicate a strong alignment between the objectives of Shariah and the SDGs.

This is in line with Khan's (2019) argument that reforming Islamic finance is necessary to achieve the SDGs, as both Maqasid al-Shariah and the SDGs aim to preserve human development. The 17 SDGs are used to address societal and environmental protection in contemporary times. Hassan *et al*. (2021) suggest that Islamic finance should have no difficulty in achieving the SDGs, as they are already aligned with the Maqasid al-Shariah framework. Moreover, Moghul and Safar-Aly (2015) note that many environmentalists emphasize the potential role of religion, or philosophical approaches derived from religion, in addressing the environmental crisis. Shariah already provides a well-established ethical framework for environmental care.

Based on the level of need, usul fiqh scholars classify the objectives (maqasid) into three categories. The first category is necessary objectives. These are essential for the establishment of the interests of the individuals and society. They are the five essentials: preservation of religion, life, intellect, progeny, and wealth. These have been confirmed through induction and textual evidence in every nation and religion, and in every time and place. The second is complementary objectives. These are needed for expansion and to alleviate hardship and difficulty. Examples include permission for the consumption of lawful things and expansion in legitimate

transactions such as sale and purchase, lending, and others. The third category is Improvement objectives. These are related to the refinement of customs and the enhancement of morals. Neglecting them does not usually lead to hardship and difficulty. Examples include cleanliness, covering one's private parts, the etiquette of eating and drinking, the prophetic practices related to these, and others (Al-khadimi, 1998).

The term 'sukuk' itself originates from the Arabic word 'sakk', which conveys meanings such as hitting, slapping, stamping, or a document representing ownership, a commercial agreement, or a financial right (Ibn Manzur, 1997). The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI, 2017) defines sukuk as "certificates of equal value representing undivided shares in ownership of tangible assets, usufruct, and services or (in the ownership of) the assets of particular projects or special investment activity. This definition holds true after the receipt of the value of the sukuk, the closing of subscription, and the utilization of funds received for the purpose for which the sukuk were issued". Moghul and Safar-Aly (2015) argue that a key distinction between Islamic finance, which includes sukuk practices, and socially responsible investing is in how they regulate the legal structure of capital provision. They highlight that Islamic finance adheres to prohibitions such as interest (riba), inappropriate uncertainty (gharar), and gambling (qimar/maysır), which have parallels in other legal systems and traditions. Meanwhile, a 'green sukuk' is a shariah-compliant version of a green bond, representing shariah-compliant investments in renewable energy and other environmental assets. Green sukuk notably addresses shariah concerns for environmental protection (Obaidullah, 2018). It can thus be inferred that when an institution chooses to implement a shariah-compliant financial practice among many non-compliant alternatives, this can be seen as an act of preserving religious practices, aligning with the maqasid principle of hifz al-deen (preservation of religion).

According to the most recent data from the 2023 Green Sukuk Allocation and Impact Report, Indonesia has issued a total of USD 6.9 billion in green sukuk since 2018, establishing the country as the world's leading issuer of green sukuk and a frontrunner in the sovereign green sukuk market. The Indonesian government has expressed its commitment to issuing more green sukuk in the future. These sukuk are poised to assist Indonesia in reducing its greenhouse gas emissions, fostering a more sustainable economy, and forging a brighter future not only for its citizens but also for the global community. This commitment demonstrates Indonesia's

implementation of green sukuk in accordance with the principles of Maqasid al-Shariah, specifically hifz nasl. This is underscored by the role of green sukuk in reducing greenhouse gas emissions, promoting a sustainable economy, and securing a better future, ensuring a planet that is suitable for future generations. This aligns with Zubair Hasan's (2006) assertion that shariah's emphasis on preserving progeny aims to ensure intergenerational equity in wealth distribution, resource conservation, and environmental sustenance, all integral aspects of a cohesive strategy.

The 2023 report highlights climate change as one of the most urgent global challenges. Its effects, such as extreme weather, rising sea levels, and shifts in agriculture, are being felt worldwide. Given Indonesia's large population, geographic position, and reliance on natural resources, the country is particularly susceptible to these impacts. To address these challenges, Indonesia has committed to reducing greenhouse gas emissions and adapting to climate change, including through the issuance of green sukuk. This commitment aligns with the Maqasid al-Shariah principle of hifz al-nafs, as issuing sukuk to mitigate climate change risks aims to protect human lives. El-Gammal and Abozaid (2021) assert that preserving the environment is crucial for fulfilling the purpose of creation, as environmental degradation could lead to the extinction of humanity, thus thwarting its stewardship of the Earth. Life is profoundly impacted by environmental degradation, as disruptions to the environment can jeopardize human survival and well-being. Therefore, Shariah places importance on environmental conservation to ensure the continued existence and health of the human race on Earth.

Furthermore, the 2023 report indicates that green sukuk allocation in Indonesia includes the construction of university facilities and infrastructure that adhere to building technical standards and green building principles, serving as a model for green construction. This reflects the implementation of the Maqasid al-Shariah principle of hifz al-Aql. By constructing environmentally friendly facilities in educational institutions like universities, Indonesia aims to raise awareness and knowledge among students and academia about environmental preservation. This aligns with Eldersevi *et al.*'s (2021) assertion that preserving intellect aims to cultivate knowledgeable individuals who can contribute to the Muslim community. This is achieved through acquiring knowledge from educational institutions, such as universities, through direct or indirect learning. In line with that, El-Gammal and Abozaid (2021) argue that the preservation of the environment includes maintaining proper reasoning in individuals to appreciate the significance of

environmental care. Without sound judgment, individuals may overlook the importance of environmental conservation and underestimate the risks associated with environmental degradation.

Moreover, the 2023 report highlights the financing projects of the 2022 Global Green Sukuk allocation in the sustainable transport sector, including the development of a new railway line in South Sulawesi Province to enhance public access to railroad services and promote regional economic development and transportation connectivity. This project also involves road and bridge construction. Additionally, other infrastructure development projects target increasing railway capacity, such as the construction of double tracks to improve transportation connectivity across Java Island. These projects include the construction of railways and bridges, as well as operation and management. The impacts of these initiatives include economic development, improved transportation connectivity, reduced road congestion, and the creation of employment opportunities. Therefore, in alignment with the principles of Maqasid al-Shariah, the Indonesian government has implemented the principle of hifz al-maal by fostering the economic development of the ummah and creating new job opportunities. Al-Shaybani (2015) explains that, from a Shariah perspective, the human role on this planet cannot be fulfilled without acquiring wealth and using it appropriately. Wealth serves as a means to attain a dignified life and enjoy God's blessings.

Based on the analysis of the 2023 Green Sukuk Allocation and Impact Report, it can be concluded that the practice of green sukuk implemented in Indonesia has generally adhered to the five main principles of the necessary objectives of Maqasid al-Shariah. These principles are essential for the establishment of the interests of individuals and society.

4.2. Impact of Green Sukuk Allocation in Indonesia

Based on the 2023 Green Sukuk Allocation and Impact Report, the accumulation of projects financed by the Global Green Sukuk 2022, Project-Based Sukuk 2022, Retail Green Sukuk 2022, and Retail Green Sukuk 2021 has had a positive impact on the fields of renewable energy, climate resilience, sustainable transportation, sustainable management of natural resources on land, green building, waste to energy and waste management, and sustainable water and wastewater management. In terms of fund allocation, from 2018 to 2022, green sukuk financing has consistently been directed towards these sectors to ensure impactful outcomes. The report indicates that the largest financing over the five-year period was allocated to the sustainable transportation sector. In contrast, the

least financing was allocated to sustainable management of natural resources. This information is illustrated in figure 1.

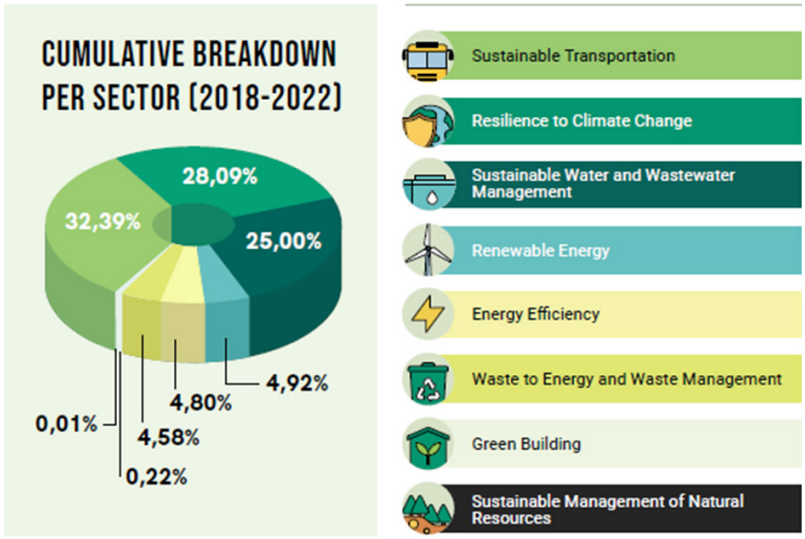

Figure 1. Greek sukuk allocation per sector, Indonesia (2018-2022)
Source: The 2023 Green Sukuk Allocation and Impact Report from the Ministry of Finance of the Republic of Indonesia

According to the report, the allocation of green sukuk towards renewable energy contributed to an annual reduction of 130,316.39 tonnes of carbon dioxide in greenhouse gas emissions. This reduction is achieved through the installation of rooftop solar photovoltaic systems and the enhancement of sea navigation devices, leading to improved energy efficiency, streamlined shipping navigation, and enhanced shipping safety. This is particularly impactful for Indonesia, as noted by Malahayati & Anggraeni (2023), who highlight that Indonesia's emissions from the energy sector have been on the rise, surpassing emissions from the forestry and land-use sector due to industrial and economic growth. The energy sector's emissions are primarily attributed to the high emissions generated during the production of electricity, heat, and other fuels, which are still heavily reliant on fossil fuels.

Based on the 2023 report, green sukuk financing aimed at enhancing resilience to Climate Change is expected to improve the service capacity discharge of raw water structures and infrastructure, reaching the national standardized target of 4.10 m3/s through the construction/rehabilitation of 685 raw water units and a 50km groundwater irrigation network. This initiative benefits areas prone to flood

and drought. Additionally, it aims to reduce the vulnerability of urban and coastal areas to flooding by developing and rehabilitating 233km of riverine flood control and 98km of coastal protection structures in the serviced provinces. While this has a notably positive impact, Alam *et al*. (2023) point out some limitations related to transparency within Indonesia's financial and greenhouse gas accounting systems concerning climate change mitigation and the accountability requirements of green sukuk.

Surprisingly, the 2023 report indicates that railway infrastructure and facility development in terms of sustainable transportation have not significantly contributed to greenhouse gas emission reduction. This is attributed to the declining trend in public transportation use due to social restriction policies and shifts in lifestyle and movement patterns during the COVID-19 pandemic. This needs to be a serious concern for the government, considering that the second biggest emitters from the energy sectors in Indonesia are the manufacturing and transportation sectors (Malahayati & Anggraeni, 2023).

In terms of sustainable management of natural resources on land, the allocation of green sukuk contributes to ecosystem restoration through forest and land rehabilitation in North Sulawesi Province, particularly in the Likupang Special Economic Zone. While this is a positive impact, it is necessary to broaden the coverage to various regions of Indonesia. This is crucial due to the significant issue of seasonal air pollution caused by Indonesian farmers. This longstanding problem involves farmers burning trees, leftover crops, and clearing forests for new crops, resulting in substantial air pollution in the region. The citizens of Malaysia, Singapore, and Indonesia have been affected by this extensive pollution, leading to health issues in the respiratory systems of many individuals (Hod, 2016).

In the realm of green building, green sukuk financing establishes a green building model by constructing university facilities and infrastructure in compliance with building technical standards and green building principles. However, According to Susanto and Sujana (2022), the adoption of green building practices in Indonesia has been slow. Several challenges impede the widespread implementation of green buildings in the country. Firstly, there is limited research on green building technology, which hinders the understanding and adoption of sustainable construction methods. Secondly, owners may not prioritize green building practices due to concerns such as higher initial costs, uncertainties about returns on investment, and project success. Thirdly, the absence of well-defined regulations and policies regarding green building practices from the

government can create uncertainty and reluctance among stakeholders to adopt sustainable construction methods. Additionally, inadequate planning processes can lead to inefficiencies and challenges in implementing green building practices effectively. Finally, green building projects may take longer to complete compared to conventional construction projects, which can be a barrier for stakeholders seeking faster returns on investment.

In terms of waste to energy and waste management, green sukuk allocation improves municipal solid waste management, projected to benefit a total of 3.7 million people. Additionally, according to Hariyani and Kusuma (2020), implementing green sukuk to finance sustainable waste management in Indonesia has three benefits: finance diversification, waste reduction, and job opportunities. However, there are challenges that must also be addressed, including high technology costs, the requirement for large state property, and an increased burden on the state budget. Furthermore, the risks include a lack of people's participation, insufficient support from local governments, and the possibility of moral hazards and human errors.

Finally, in the realm of sustainable water and wastewater management, green sukuk allocation strengthened the service capacity of water supply for approximately 284,628 hectares of agricultural areas prone to flood and drought. This is achieved through the development and rehabilitation of 33 irrigation areas, along with 1,158km of irrigation networks. Furthermore, it enhanced the reservoir storage capacity of natural and artificial water storage to approximately 4,482 million m^3 through the development and rehabilitation of 447 smaller and larger dams, 18 lakes, and 119 rain-fed water storage facilities. Additionally, it improved the drinking water treatment capacity to a discharge rate of 150-1,100L per second, and the wastewater treatment capacity through the construction and rehabilitation of water treatment plants and house connections. These developments are significant positive impacts. However, Marleni and Raspati (2020) identify ongoing problems with wastewater management in Indonesia. Several issues have been identified, such as low public awareness and participation, lack of laws, regulations, and standards, absence of a clear framework to assist decision-makers, gaps in regulation and implementation, funding issues related to construction, operation, and maintenance, and low priority on domestic wastewater handling.

Through an analysis of the data on the allocation impact of green sukuk and a comparison with the twelve fundamental social foundations suggested by Raworth (2017), it is clear that the implementation of green sukuk in Indonesia aligns with

Raworth's (2017) framework concerning clean water and adequate sanitation, access to energy, and peace and justice. Nevertheless, the attainment of all twelve foundations cannot be exclusively dependent on green sukuk finance. Additional supplementary instruments and actions are required in order to collectively achieve these twelve foundations by 2030.

4.3. Challenges and Opportunities

Based on a comprehensive literature review, this section identifies significant opportunities and challenges encountered in the implementation of green sukuk financing in Indonesia. Malahayati & Anggraeni (2023) delineate the potential advantages and opportunities associated with utilizing green sukuk for financing Indonesia's green economic recovery from the COVID-19 pandemic. These potential aspects encompass several key points. Firstly, the green sukuk instrument has garnered substantial market enthusiasm, attracting global investors from Islamic-majority countries and the Asian region. The competitive returns of green bonds make them appealing to investors, reflecting the increasing interest in climate change and green projects globally. Secondly, green sukuk plays a role in contributing to Indonesia's economic recovery during the COVID-19 pandemic by facilitating financing flows both domestically and internationally. The issuance of global green sukuk helps Indonesia secure funding for green projects, supporting economic recovery efforts. Thirdly, the flexibility in allocating green sukuk funds allows the government to adjust project allocations based on evolving needs and priorities, ensuring that financing can be directed to projects aligning with Indonesia's Climate Budget Tagging and national conditions, thereby enhancing the effectiveness of green project financing. Finally, the stability of green sukuk investments makes them an attractive long-term investment option, with promising performance in supporting climate project financing, indicating their potential as a stable and reliable investment vehicle for investors.

Endri *et al*. (2022) contend the potential role of green sukuk as a financing mechanism for sustainable development in Indonesia. In their opinion, green sukuk has the capacity to attract investors seeking socially responsible investment opportunities. Through the issuance of green sukuk, enterprises can secure funding for initiatives that advance environmental sustainability, including renewable energy projects, green infrastructure development, and climate change mitigation efforts. However, the authors highlight various challenges and issues that impede the issuance of green sukuk in Indonesia. One significant challenge identified is the lack of comprehension among market participants regarding green projects

and sukuk structures. This lack of awareness and knowledge acts as a barrier to the widespread adoption of green sukuk as a financing mechanism for sustainable projects. Furthermore, the absence of government incentives is cited as another obstacle. In the absence of supportive policies or incentives, enterprises may be less inclined to issue green sukuk, thereby limiting the expansion of this market segment. The authors underscore the importance of addressing these challenges to stimulate the issuance of green sukuk in Indonesia. To address these challenges, Endri *et al*. (2022) propose several solutions. They recommend increasing awareness and understanding of green sukuk through socialization and educational efforts targeted at market participants. Additionally, they suggest revising and strengthening regulations related to green sukuk to establish a clear legal framework for issuers and investors.

Malahayati & Anggraeni (2023) also identify several challenges. These challenges encompass project selection and prioritization, wherein the government's decision making process on project prioritization may raise investor inquiries, necessitating transparency and clarity in project selection to ensure sustainable financing and green project development. Another challenge is the potential for 'green shading' in green sukuk instruments, where projects may not entirely align with their intended environmental impact, posing a risk of projects labelled as renewable energy including deforestation elements, thus compromising project integrity. Additionally, the flexibility of green sukuk allocation, while beneficial for adjusting based on project performance, may impede large-scale climate change mitigation projects requiring continuous development for achieving emission reduction targets, if not managed carefully. Furthermore, the transition from fossil fuels to renewable energy sources poses a significant financing challenge due to high costs and perceived risks associated with new technologies, particularly in the renewable energy sector, which is crucial for Indonesia's green development and may expose the government to reputation risks in financing green contracts.

Finally, Rahman *et al*. (2022) assert that the challenges associated with implementing green sukuk policies in Indonesia to achieve environmental sustainability are multifaceted and necessitate strategic solutions. Indonesia's large population and diverse natural resources offer opportunities for job creation and community involvement in environmental conservation, but Indonesia also faces significant seasonal air pollution caused by agricultural practices such as burning trees and crops, leading to severe respiratory health issues and affecting neighboring countries like Malaysia and Singapore. Initiatives like green sukuk can

play a pivotal role in creating employment and promoting sustainable practices, requiring innovative ideas and effective implementation strategies. Effective policy implementation and governance structures are critical for the success of green sukuk initiatives. The government's role in issuing sovereign green sukuk and managing funds transparently is essential for attracting investments and achieving environmental objectives. Another challenge is that the Indonesian government's priorities do not always align with the actual allocations of green sukuk funds. The government aims to decrease greenhouse gas emissions by 29% by 2030, with renewable energy sources like solar and wind power being essential for this objective. Nonetheless, the financial resources designated for the renewable energy sector are rather minimal, comprising about 8% in 2018 and then decreasing to 5% in 2019. Meanwhile, the energy efficiency sector, which focuses on energy conservation in facilities such as factories and buildings, received increased financing, escalating from 6% in 2018 to 27% in 2019. This indicates an allocation that does not align with strategic requirements, potentially leading to inefficient resource utilization and impeding sustainable initiatives.

Rahman *et al*. also assets that there is a need to enhance awareness and education among Indonesian farmers about sustainable agricultural practices. Providing training and resources can help mitigate harmful practices and promote environmentally friendly farming methods, essential for long-term environmental sustainability.

5. Conclusion

The comprehensive analysis in this study reveals that the implementation of green sukuk by the Indonesian government aligns closely with the essential principles of Maqasid al-Shariah. Indonesia's decision to choose a shariah-compliant sukuk instrument for environmental conservation, amidst numerous non-shariah-compliant instruments, reflects adherence to the principle of hifz al-deen within Maqasid al-Shariah. Furthermore, Indonesia's commitment to becoming the world's largest issuer of green sukuk, as well as its pledge to issue more green sukuk to build a more sustainable economy and create a better future, aligns with the principle of hifz al-nasl. Moreover, Indonesia's commitment to issuing green sukuk with the aim to reduce greenhouse gas emissions and adapt to climate change impacts is in line with the principle of hifz al-nafs. The allocation of green sukuk financing to set a green building model through the construction of university facilities and infrastructure in accordance with building technical

standards and green building principles is consistent with the principle of hifz al-aql as it promotes environmental conservation awareness among students and academia. Finally, the allocation of green sukuk financing in the sustainable transport sector, such as the development of new railway lines in South Sulawesi and Java, which will impact economic development, improve transportation connectivity, reduce road congestion, and provide employment opportunities, aligns with the principle of hifz al-maal within Maqasid al-Shariah.

The 2023 Green Sukuk Allocation and Impact Report indicates that green sukuk financing in Indonesia has had a positive impact on a variety of sectors, including renewable energy, climate resilience, sustainable transportation, sustainable management of natural resources on land, green building, waste to energy and waste management, and sustainable water and wastewater management. Nevertheless, there remain disparities and concerns that necessitate attention in these sectors, such as seasonal air pollution; the need for transparency in Indonesia's financial and greenhouse gas accounting systems; sluggish uptake of green building practices; inadequate support from local governments; limited public awareness and involvement; a dearth of laws, regulations, and standards on wastewater management; and the absence of a coherent framework to aid decision makers.

This study reveals significant opportunities and challenges in implementing green sukuk financing in Indonesia. Green sukuk presents an attractive option for financing sustainable projects, with its ability to attract global investors and contribute to economic recovery, especially following the COVID-19 pandemic. However, challenges such as lack of awareness, funding discrepancies, and project selection issues need to be addressed to fully realize its potential.

Ultimately, this research provides a significant contribution towards assisting stakeholders in formulating future policies and strategies for green sukuk. It presents a thorough examination of the effects of green sukuk allocation in Indonesia, emphasizing the advantages and challenges linked to this unique method of financing. The study provides useful insights into how green sukuk initiatives can effectively address environmental and social concerns, hence supporting sustainable development. This study highlights both the potential of green sukuk to promote sustainable activities and the actual challenges that must be addressed to fully achieve their benefits. By clarifying the correlation between the allocation of green sukuk in Indonesia and the principles of Maqasid al-Shariah, this article illustrates how green sukuk projects not only tackle environmental

sustainability but also achieve the wider goals of Islamic law. This alignment highlights the capacity of green sukuk to advance comprehensive and sustainable development, providing a valuable framework for policymakers and practitioners in the Islamic financial sector.

This paper proposes specific recommendations for stakeholders involved in green sukuk financing in Indonesia. To attract global investors and assure accountability, the government must establish and enforce unambiguous and transparent legislation and guidelines for the issuance of green sukuk. These should include specific criteria for project selection and reporting standards. Financial institutions and investors should provide comprehensive training programs for employees and stakeholders on green sukuk, sustainable financing, and environmental impact assessments. This would enable them to make well-informed decisions and carry out projects efficiently. Corporate entities should synchronize their corporate plans with sustainability objectives by incorporating environmental, social, and governance factors into their business operations. This will involve making green sukuk a fundamental element of their financing strategy. Local government authorities are advised to discover and cultivate local initiatives that adhere to the standards of green sukuk, with a specific emphasis on renewable energy and sustainable infrastructure. Furthermore, they are urged to aggressively endorse these initiatives so that they can receive investment through green sukuk. Educational institutions should promote awareness and understanding among the general public and relevant stakeholders regarding the advantages of green sukuk and sustainable finance. They should also actively promote policies that facilitate these initiatives and encourage greater involvement in green sukuk projects. Lastly, it is important for financial institutions, relevant government agencies, the public, and civil society to actively monitor green sukuk projects to ensure they achieve their environmental objectives. They should also provide ongoing input to the issuers and regulators to improve the effectiveness and reliability of green sukuk funding.

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