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## The Evolution of Green Sukuk in Indonesia

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### ABSTRACT

This paper explores the evolution of Green Sukuk in Indonesia, detailing its development, fund utilization, and best practices. Green sukuk is an important instrument in addressing environmental and sustainability issues with Islamic principles. Indonesia is the first country to issue the sovereign green sukuk with remarkable development in global, retail, and project-based green sukuk. Indonesia issued its first corporate green sukuk in 2024 by Bank Syariah Indonesia. The study provides a comprehensive review of literature on sustainable finance, highlighting key features of Green Sukuk. It also examines Indonesia's strategic frameworks and policies that have facilitated the growth and success of Green Sukuk. The findings show that Indonesia has limited corporate green sukuk. To boost the corporate green sukuk, there needs to be education and incentives by the government for the potential issuers to motivate them to issue the green sukuk. Moreover, Indonesia needs to establish partnerships with many international and local institutions to align the green bond framework with the international framework. By doing so, the green sukuk of Indonesia can be more internationally accepted, this way can boost the international capital to be invested in Indonesia.

**Keywords:** Green Sukuk; Sovereign Green Sukuk; Corporate Green Sukuk

**JEL Classification:** G10, Q50

**How to cite:** Adzimatunur, F., Oliy, R., Japal, D. F. T. (2024). The Evolution of Green Sukuk in Indonesia. *Proceeding International Conference on Islamic Economics and Business (ICIEB)*, 2024, 3(1), pp. 160-173. DOI: <https://doi.org/10.14421/icieb.2024.3.1.1486>

### INTRODUCTION

The verb "sakk," which in the singular means "to strike" or "to put a seal on a document," is translated as "sukuk" in the plural. Sukuk is a written document that certifies a transaction and lays out the terms and conditions for the parties to the contract in the framework of fiqh. Mary, P., Roslen, S.N.M., and Sahlan, L.A.B. (2021). Financial instruments known as sukuk are issued by specialized entities with the aim of financing different rights and assets. In line with Shariah

laws and principles, holders of Sukuk are entitled to a proportionate share of the fixed or variable income earned from such assets or rights. These may be tied to particular projects, investments, or activities IIFM. (2022). Simultaneously, Islamic finance has developed into a reliable and moral system of money distribution. In response, a brand-new financial product called Green Sharia Bonds, or Green Sukuk (GS), has surfaced. Investors looking for investment options that

adhere to Islamic values and are also environmentally sustainable are becoming more and more interested in this new financial solution. Dey, D., Hussain, T. and Hauman, M. (2016). The development of novel products with an emphasis on Environmental, Social, and Governance (ESG) will likely be a primary investment goal In the fight against climate change, according to recent Sukuk market initiatives. One of these innovative products is Green Sukuk, which is a subset of ESG Sukuk. The proceeds of this product are intended exclusively to finance environmentally friendly initiatives and assets. In 2021, the total value of ESG Sukuk hit a record US\$6.1 billion. Alkadi, R. S. (2024). According to estimates, green sukuk could provide an extra \$30–50 billion in funding for sustainable development (SDG) by 2025, in compliance with the Paris Agreement UKIFC (2021).

Because all of the proceeds from the issuing of green sukuk bonds go toward financing or refinancing ecologically friendly projects, these bonds adhere to Sharia law. These initiatives support attempts to protect biodiversity and adapt to climate change. As a result, there are two primary requirements for issuing Green Sukuk. Within the range of Sharia-compliant Socially Responsible Investment (SRI) goods, Green Sukuk is a unique category. Delle Foglie, A. and Keshminder, J.S. (2022), A financial product that is Islamic and is becoming more and more popular among governments and policymakers worldwide is green sukuk. These tools are becoming more and more common in investment plans for green financing or environmentally friendly projects across a range of industries, including climate change initiatives, waste and energy management, renewable energy, sustainable agriculture, and sustainable transportation. Brahim, C.T. (2018), Generally speaking, Green Sukuk (GS) have characteristics that align with

environmental preservation and Shariah norms. Hanic, A. and Smolo, E. (2023). In order to implement the national development strategy aimed at mitigating the effects of climate change, the Indonesian government has introduced green financing mechanisms and developed ecologically sustainable infrastructure. Achieving sustainable economic growth is the aim. As a result, the Ministry of Finance introduced the Green Sukuk, a brand-new investment vehicle for sustainable financing. Investing in environmental projects can be made more advantageous and hopeful by using green sukuk. Abubakar, L., & Handayani, T. (2020). Green finance is categorized as Socially Responsible Investment (SRI), which focuses on investments and portfolio financing that has a positive impact on the environment. Green Sukuk (GS), Green Bonds, and other financial instruments are examples of green finance products.

Indonesia issued a USD 1.25 billion Green Sukuk in March 2018, setting the precedent for green bond issuance in Southeast Asia. This is a nation's first Sukuk issue globally. Green Sukuk's issuance is another way that Indonesia is demonstrating its adherence to the Paris Agreement, which was approved on April 22, 2016. Among other things, the Paris Agreement produced a deal on Nationally Determined Contributions (NDCs), which govern and project member nations' projected reductions in greenhouse gas (GHG) emissions after 2020. The framework for green bonds and green sukuk (2019). The amount of green sukuk issued more than tripled in 2019, with the majority of the proceeds going toward renewable energy initiatives. Green sukuk ar' intended to address environmental and climate change problems, and they are increasingly being used as a tool in the fight against sustainability. Abdullah, N. and Nayan, M.A. (2020), Similar to green bonds, green

sukuk are issued with all proceeds from the Islamic capital market designated for the financing of green or ecologically friendly initiatives. Keshminder, J.S., Abdullah, M.S. and Mardi, M. (2022). This supports biodiversity preservation as well as climate change adaptation and mitigation. Green sukuk is a type of financial instrument that aligns with the goal of Maqasid Shariah, which seeks to advance sustainable development by upholding the values of equality and justice Hossain, G.M.S. (2020).

Therefore, research is needed that summarizes all studies related to green sukuk in reputable journals to help researchers find new insights into green sukuk. This research utilizes a structured literature review analysis technique to review green sukuk literature from eight leading journal databases namely ScienceDirect, Springer, JSTOR, Emerald Insight, Sage Journals, Oxford Journal Academic, Cambridge Core, and Taylor and Francis Online as well as report from institutions, statistical data, and other articles to show the evolution of the Green Sukuk in Indonesia. In addition, this study also aims to identify key areas where researchers and academics can contribute in enhancing research on green sukuk. Thus, the main objective of this research is to provide input for government policy and future directions for further research Alkadi, R. S. (2024). This research is divided into five parts. Section 1 provides the research background underlying this topic. Section 2 describes the literature review, covering the concept of sustainable finance and alternative sources of financing for green projects. Section 3 presents the methodology for assessing the green sukuk research area. Section 4 presents the results obtained. Finally, Section 5 summarizes all findings as well as providing policy recommendations and directions for future research as well as providing policy

recommendations and directions for future research.

## LITERATURE REVIEW

### Fundamentals of Islamic Finance

The roots of Islamic finance stem from social and ethical principles. This is the underlying difference between conventional finance and Islamic finance. Islamic finance also emphasizes risk sharing, the prohibition of Riba and recommends investing only in projects that have social benefits. The first principle that characterizes Islamic finance, as explained earlier, is the principle of risk sharing. This is different from the system that applies to the conventional financial system. In their system they focus on the application of dominant transactions. Whereas in the financial system that exists in Islamic finance is very different. In the Islamic financial system, there are two types of application, namely mudarabah with its profit-sharing system and musharakah with its joint venture system. In Mudarabah, there will be two parties in one contract. The first party will be in charge of preparing the capital, while the second party will manage or manage the business by offering their expertise and with the rules of profit sharing according to the agreement of both parties. Then in the event of loss will be borne by the first party as the provider of capital except when the loss is caused by the negligence of the second party, then the loss will be borne by the second party. Musharakah contracts, on the other hand, involve both parties contributing to the capital and sharing profits and losses proportionally. This fair sharing of risk encourages entrepreneurship and reduces the burden on one party, adjusting financial rewards to the level of effort and risk taken (Iqbal & Mirakhor, 2012).

Furthermore, what characterizes Islamic finance is the prohibition of Riba. This prohibition

is the cornerstone of the principles that exist in Islamic finance. Riba leads to where in debt and credit transactions required extra or additional. This is also clearly explained in the Al-Quran Surah Al-baqarah verse 275 which means "Allah has legalized buying and selling and forbidden Riba" (QS. Al-Baqarah [2]:275-281). By agreeing not to allow Riba, Islamic finance can be an intermediary in promoting equality, justice, and welfare in the social sphere, especially in the sphere of financial transactions (Putri, Paramesti, & Ramadhan, 2022). Moreover, with its principle of only investing in socially beneficial projects, Islamic finance can also serve as an intermediary to avoid losses that can occur in investing. For example, there are many sectors that have a positive impact on society, such as health, education and infrastructure improvement. This principle is closely related to the concept of Halal (allowed) and Haram (prohibited). Investments must be made in accordance with applicable sharia laws. This means that we are not allowed to invest in industries or companies that support non-halal activities such as allowing alcohol, gambling, or pork production. This ethical investment approach ensures that financial activity promotes social welfare and sustainable development, aligning with Shariah law (Isa, Buba, & Ali, 2022).

Equally important in Islamic finance is Shariah compliance. This covers the critical aspects of Islamic finance by ensuring that all financial instruments and transactions are compliant with Islamic law. To ensure that everything is Shariah compliant, there are several aspects or processes that must be accomplished. First, the main point that exists in Islamic finance is the statement that Islam strictly prohibits activities related to Riba. Secondly, it is not allowed to engage in uncertain activities or gharar as well as speculation or maysir. Transactions

must be transparent so that all parties can get the same clarity and there is no misunderstanding between them. Then, it is also not allowed to fund industries or activities that are prohibited (haram) and must be in line with ethical and social principles, for the welfare of society (Abdullah & Chee, 2010). This is where the roles and responsibilities of Shariah Supervisory Boards (SSBs) are established to ensure all activities are in accordance with Shariah.

### Green Sukuk

Before discussing green sukuk, as already mentioned, the terms of sukuk means certificate, deed or check. The term comes from the Arabic plural meaning of the word 'sakk'. Alam in his research said that the International Islamic Fiqh Academy in Jeddah, Saudi Arabia, launched the information that in the modern context they have made the basis or basis of the development of sukuk for financial instruments. According to him, the result of the asset can represent a form of written certification that can be sold on the condition that the asset is a tangible asset (Alam, Duygun, & Aris, 2016). This is justified by Witjaksono in his research, he stated that these statements are very important for sukuk for legitimacy as a new instrument that exists in the global financial industry, to describe or represent ownership of tangible assets in accordance with applicable sharia principles. He also emphasized that sukuk have the same value as the ownership certificate that represents them and will also not be separated or divided from the underlying assets (Witjaksono, et al., 2020).

Then a new initiative emerged called green sukuk. The idea of green sukuk itself is to mitigate climate change. This characterizes sukuk designed to mitigate climate change based on Islamic sharia which contains the mission of spreading the general welfare of society on Earth

(Basov & Bathi, 2016); (Abdullah & Keshminder, 2022); (Moghul & Safar-Aly, 2015). Liu and Lai in their research stated that green sukuk use principles by combining sharia principles and green principles. Which these principles are then used as an instrument to support sustainable and environmentally friendly projects (Liu & Lai, 2021). It can be said that the initiation of green sukuk in Islamic finance has offered various principles that underlie sustainable finance practices. Previous relevant studies have also presented a strong foundation regarding the development of sukuk and green sukuk. However, this study offers a new contribution by focusing on the evolution of green sukuk in Indonesia. Because green sukuk in Indonesia shows great potential in supporting climate change mitigation and sustainable development.

### **The Islamic Legal Perspective: Green Sukuk**

From the perspective of Islamic law, green sukuk must still fulfill all existing sharia compliance criteria. These criteria include the prohibition of Riba, Gharar and Maysir as well as considering investments that are beneficial to the social community. In addition, it must also be in accordance with the applicable provisions, namely in maqashid sharia which has the aim of protecting the soul, protecting the mind, protecting offspring, protecting property, and protecting the environment (Iqbal & Mirakhor, 2012). Which turns out without realizing this principle is very equal in green sukuk, because it is in accordance with the purpose of designing green sukuk, which is used to finance environmentally friendly projects. Examples include renewable energy, water conservation, and waste management. So that besides clearly promising financial benefits, it can also maintain and improve the quality of life, which is also in line with the contents of maqashid sharia (Kamali, 2008).

In practice, green sukuk must be designed in such a way as to comply with sharia compliance. For example, it can use valid sharia contracts such as Istishna(project financing), Musharakah (joint venture), Mudharabah (partnership) and Ijarah (lease). In addition, transparency and fairness in the sharing of both risks and profits for all parties involved are also required. For this reason, in practice, the role of the Sharia Supervisory Board is very necessary to ensure that all processes starting from the issuance process, the structure of the sukuk, the projects funded and all aspects involved are in accordance with the principles of Sharia Law (Ali & Nisar, 2010).

### **METHODOLOGY**

According to Punch and Oancea (2014: 3), qualitative research is research that in its structure does not use numerical data as data, but uses definitions or we can call them written texts. So in general it can be said that qualitative research will involve exploration activities on a term through interpretation of studies in gaining an understanding (Bassot, 2022). This study uses desk research methods in analyzing its data. The term desk research reveals the meaning of several ways that can be used to conduct strong research by collecting qualitative data from existing sources (Mensink, Loos, & Linders, 1998). In this case, this study uses secondary data that describes or analyzes primary sources (NTG, 2019). This includes books, journals, texts, government regulations, reports and news related to the main discussion of this research, namely Green Sukuk. The main objective of desk research is to identify and summarize previous research, reports, and documents that are in the public domain to build on existing knowledge regarding Green Sukuk.

In the context related to the title of this research, namely "The Evolution of Green Sukuk

in Indonesia” using a desk research approach is the right decision to achieve the goal of understanding green sukuk over several time periods. So that this study will not only present an explanation of the definitions and structure of green sukuk but also involve an in-depth analysis of the history of its evolution and how it has developed over time. In addition, because it uses secondary data as its reference such as applicable government regulations, related journals, books and other relevant data, this study can also show its relationship with the trends, challenges and opportunities of green sukuk itself. So that it is expected to provide a comprehensive insight into the green sukuk instrument as a real practice of financial instruments that support sustainable development in global finance.

## RESULT AND DISCUSSION

### The Development, Fund Utilization, and Best Practices of Green Sukuk in Indonesia

Indonesia’s initial initiative of Green Sukuk began with the formation of the Republic of Indonesia Green Bond and Green Sukuk Framework in 2017. The first Sovereign Green Sukuk in the world was issued by Indonesia in 2018. The nine eligible sectors to be financed by Green Sukuk are stated in the framework. The framework contains guideline for selecting projects, managing proceeds, and reporting on the Sukuk. The framework was upgraded to “SDGs Framework”.

The SDGs Framework demonstrates the government’s commitment to issuing the Green Securities, i.e. Green and Blue Bonds and Sukuk. Together, these are known as “Green and SDGs Securities.” Their purpose is to fund projects that provide environmental and social benefits, aligning with Indonesia’s 2030 goals for sustainable development and climate action. One significant update in the SDGs Framework is the

broadened eligibility criteria. It now includes projects focused on green and blue initiatives that also offer social benefits, as well as social projects that contribute to environmental goals.

Indonesia has three types of Green Sukuk, i.e. Global Green Sukuk, Retail Green Sukuk, and Project-based Green Sukuk. Global Green Sukuk is a green sukuk issued for international investors, Retail Green Sukuk is issued to individual investors of Indonesian citizens. Meanwhile, Project-Based Green Sukuk is issued to individual and institutional investors, specifically to finance certain projects. Indonesia issued the fifth Green Sukuk in 2022 with cumulative Green Sukuk issuance (2018-2022) value as much as USD 6.9 Billion, with USD 5 billion of Global Green Sukuk, USD 1.495 billion of Retail Green Sukuk, and USD 450 million of Project-based Green Sukuk. Indonesia’s commitment to the 2015 Paris Agreement’s Nationally Determined Contributions (NDCs) and achieving national development goals are supported by the issuance of the Project-based Green Sukuk and Retail Green Sukuk (ST 009) in 2022. The issuance of the instruments enabled Indonesia to develop various non-state budget climate financing instruments consistently.

Indonesia is committed to supporting its Nationally Determined Contributions (NDCs) and achieving national development goals through projects that address climate change mitigation and adaptation. Indonesia’s mitigation regulations focus on the energy, waste, industrial processes and product use (IPPU), agriculture, and forestry sectors. The country has adopted the National Action Plan on Climate Change Adaptation (RAN-API), providing a national framework for adaptation initiatives that are incorporated into the National Development Plan.

Reducing the risks of climate change in agriculture, water, energy security, forestry, maritime and fisheries, health, public services, infrastructure, and urban systems by 2030 is the medium-term goal of Indonesia's climate change adaptation strategy. This will be achieved by strengthening local capacities, improving knowledge management, aligning climate change adaptation and disaster risk reduction policies, and applying adaptive technologies. (Indonesia's Ministry of Finance, n.d.). In Indonesia, the distribution of green sukuk funds leans more towards climate change mitigation, with 57% allocated to these efforts. Meanwhile, 43% of the green sukuk funds are dedicated to climate change adaptation projects. (Katadata, 2023).

According to Indonesia's Ministry of Finance (2023), the Green Sukuk Allocation and Impact Report 2023 highlights significant progress in sustainable financing. In 2022, Indonesia made a significant mark in the global financial landscape by issuing the largest Green Sukuk tranche in the world, valued at USD 1.5 billion. Investors from various regions participated, with 34% coming from Asia (excluding Indonesia and Malaysia), 27% from Europe, 25% from the USA, 8% from the Middle East and Malaysia, and 6% from Indonesia. In the same year, Indonesia also launched a Project-Based Green Sukuk worth IDR 6.73 trillion, attracting investments from insurance companies (23.9%), banks (22%), the Bank of Indonesia (10.9%), pension funds (14.9%), mutual funds (2.67%), individual investors (0.09%), foreign investors (1.92%), and others (23.41%).

The appeal of Green Sukuk is particularly strong among the younger generation. In 2022, most investors in the Retail Green Sukuk were millennials, making up 53.89%, followed by Gen X at 26.70%, Baby Boomers at 16.28%, and Gen Z at 1.97%.

The funds raised from the 2022 Global Green Sukuk were channelled into various sustainable projects. A significant portion, 18.25%, went to sustainable transportation. Other allocations included resilience to climate change (4.21%), sustainable water and wastewater management (2.19%), renewable energy (0.17%), and waste to energy and waste management (0.15%). Some projects from 2021 were refinanced, including climate change resilience (20.42%), sustainable transportation (0.26%), green building (0.15%), and sustainable water and wastewater management (54.16%). These initiatives were managed by the Ministry of Public Works and Housing, the Ministry of Transportation, and the Ministry of Environment and Forestry.

A 2024 report from the Ministry of Finance highlighted that the 2022 Retail Green Sukuk was used to fund sustainable transport (53.74%), sustainable water and wastewater management (45.22%), and climate change resilience (1.03%). The responsible project owners were the Ministry of Public Works and Housing and the Ministry of Transportation. The Project-based Green Sukuk in 2022 also supported climate change resilience (10.71%), sustainable water and wastewater management (7.33%), and green building (0.96%). Additionally, projects from the 2020 fiscal year were refinanced, focusing mainly on sustainable water and wastewater management (75.75%) and sustainable transportation (4.84%). These projects were overseen by the Ministry of Public Works and Housing and the Ministry of Transportation.

Looking at the broader picture from 2018 to 2022, the cumulative data reveals a strategic allocation of Green Sukuk funds. Sustainable transportation received the largest share at 32.39%, followed by climate change resilience (28.09%), sustainable water and wastewater management (25%), renewable energy (4.92%),

energy efficiency (4.8%), waste to energy and waste management (4.58%), and green building (0.22%). This comprehensive approach underscores Indonesia's commitment to sustainable development and environmental stewardship.

### Comparative Analysis with Malaysia's Case

Some initiatives related to Green Sukuk in the world are established by Malaysia, Indonesia, and The Islamic Development Bank (IsDB). The first green sukuk was issued in 2017 by Tadau Energy, a renewable energy company in Malaysia, raising \$59 million to finance a solar power plant in Malaysia. Indonesia issued the world's first sovereign green sukuk in 2018 and the first retail green sukuk in 2022. The Islamic Development Bank (IsDB) was the first multilateral development bank to issue a green sukuk, which was also the first one denominated in euros.

The issuance of green sukuk follows a specific framework set by the issuer and usually involve an independent third-party review to ensure credibility and compliance with the defined standards. Essentially, this ensures that the green sukuk align with recognized guidelines and provide assurance to investors about the environmental integrity of the projects they are funding. These frameworks include (UNDP, 2021):

1. 2014 – Sustainable & Responsible Investment sukuk framework issued by the Securities Commission Malaysia (SCM)
2. 2018 – Green Bond and Green Sukuk framework implemented by Indonesia.
3. 2019 – Sustainable Finance Framework introduced by the Islamic Development Bank

Various government initiatives drove Malaysia to lead the green sukuk issuances, i.e. Sustainable and Responsible Investment (SRI) Sukuk Framework in 2014, Value-based intermediation guidelines in 2018, and a Joint

Committee on Climate Change in 2019. According to the data by World Bank, as of July 2020, there is a total of 17 green sukuk issuances (10 from Malaysia, 4 from Indonesia, 2 from the UAE, and 1 from Saudi Arabia).

The development of green sukuk aims to achieve economic, political, and environmental objectives. The Securities Commission Malaysia (SCM) has three initiatives to reach these goals: green sukuk standard setting, multi-agency promotion and growing international influence. Malaysia has aligned its Sustainable and Responsible Investment (SRI) framework with the Green Bond Principles (GBP) to establish standards for green sukuk. This alignment was achieved in partnership with the World Bank. By aligning green sukuk with GBP, Malaysia makes these instruments more attractive to international investors to diversify their green bond portfolios. Moreover, Malaysia's role as a leading centre for Islamic banking and finance is crucial in bridging international conventional financial products with Islamic values (Liu & Lai, 2021).

The SRI framework issued by the Securities Commission Malaysia (SCM) includes guidelines for multi-agency promotional efforts. SCM formed partnerships with various institutions and ministries to promote green sukuk, leveraging the expertise and connections of its partners. SCM has a dedicated team focused on ESG (environmental, social, and governance) financing. This team actively engages with the market, banks, investors, and potential issuers. SCM also reached out to local credit rating agencies to foster collaboration and provide training on green finance rating and second-party assessments as more local companies began issuing green sukuk (Liu & Lai, 2021).

In increasing its scale of influence, SCM co-chaired with other securities and capital market association in the world in designing green bond

framework. For instance, the ASEAN Green Bond Standard was designed by the SCM and ASEAN. SCM also established partnership with the World Bank, UNDP, and Islamic Development Bank to promote green sukuk and facilitate the international adoption of green sukuk (Liu & Lai, 2021).

Malaysia leads the corporate green sukuk issuances. In 2020, Cagamas Berhad, Malaysia's National Mortgage Corporation, issued the country's first ASEAN sustainability sukuk worth RM100 million for affordable housing. This sukuk was issued under Cagamas' Sustainability Bond / Sukuk Framework supporting Sustainable Development Goals (SDGs) and Malaysian government initiative, as well as aligning with both local and international standards. This sukuk has competitive price driven by high investor demand for green/social sukuk, the tailored framework allowing specific SDG mapping, and future aspirations for more sustainable sukuk issuance. Another corporate green sukuk was issued by HSBC Amanah Malaysia. HSBC Group issued a highly successful US\$1 billion SDG bond in 2017 and HSBC Amanah launched the world's first SDG sukuk of RM500 million in 2018, supporting projects related to multiple SDGs (UNDP, 2021).

While Malaysia issued numerous corporate green sukuk, Indonesia issued the global, retail, and project-based green sukuk. Indonesia has developed a Green Bond and Green Sukuk Framework under which it plans to finance Eligible Green Projects via the issuance of Green Bonds and Green Sukuk. The Eligible Green Projects must fall into at least one of the following sectors: Renewable Energy; Energy Efficiency; Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction; Sustainable Transport; Waste to Energy and Waste Management; Sustainable Management of

Natural Resources; Green Tourism; Green Buildings; and Sustainable Agriculture.

Indonesia has Budget Tagging Process-an integrated process involving the individual ministries responsible for the individual projects as well as the Ministry of Finance- to identify expenditures on projects that deliver specified climate change benefits in accordance with the Indonesia's climate objectives. The Budget Tagging Process was developed with the support of the UN Development Programme and involves a detailed assessment of the climate benefits of projects undertaken by Ministries. While the environmental benefits of each project are accessed by the individual ministries together with the Climate Change Secretariat of BAPPENAS and validated by the Ministry of Environment and Forestry to be consistent with Indonesia's NDC and endorsed by the Ministry of Finance for budget allocation.

### Opportunities and Challenges

The Islamic Finance Council UK (UKIFC) estimates that an additional US\$30-50 billion of capital towards the Sustainable Development Goals (SDGs) can be raised by 2025 through green and sustainability sukuk (UNDP, 2021), highlighting Indonesia's potential and opportunity to significantly grow and exploit this field.

Indonesia has issued the sovereign green sukuk in 2018. The green sukuk issued was the global, retail, and project-based green sukuk. As for the corporate green sukuk, Indonesia's corporate green sukuk market is very limited. There is a growing need for more corporate green sukuk (UNDP, 2021). The first issuance of corporate green sukuk was exemplified by Bank Syariah Indonesia in May 2024. Bank Syariah Indonesia, has launched the BSI Sustainability Sukuk or Sukuk Mudharabah Keberlanjutan and has received investor bookings around IDR 9

trillion. BSI experienced oversubscription for the sustainable sukuk it issued. BSI plans to issue Sustainability Sukuk worth Rp3 trillion with a yield range of 6.40% - 7.20% for terms of 1, 2, and 3 years. The funds raised from the sukuk issuance will be used to support financing in the categories of environmentally friendly business activities and socially responsible business activities (Burhan, 2024).

The corporate green sukuk can offer better pricing advantages. For example, the Cagamas sustainability sukuk was issued with an interest rate that was 2 basis points (0.02%) lower than the interest rate of the Islamic Medium-Term Notes issued by Cagamas at the same time. The lower rate for the sustainability sukuk was primarily due to strong investor demand for green and social sukuk. This high demand for green and social sukuk, coupled with their limited availability, allowed Cagamas to offer them at a more favorable (lower) interest rate (UNDP, 2021). As for Indonesia, the issuance of the first corporate green sukuk by BSI shows an oversubscription, means many investors are interested in investing in this new alternative of green bond. The corporate green sukuk can be an alternative financing option.

Western global investors show a growing interest for Environmental, Social, and Corporate Governance (ESG) investments. This provides an opportunity to raise funds via green sukuk and attract more new investors. From the perspective of those supplying financial products (Islamic finance issuers), there is a significant opportunity to attract investments from Western investors. These Western investors are increasingly looking for investments that align with ESG principles and demonstrate efforts to reduce carbon emissions as part of their commitments to achieving net-zero emissions. By issuing green sukuk, Islamic finance issuers can diversify their investor base beyond

the traditional market of Shariah-compliant investors, resulting in a more varied pool of capital. While from the perspective of investors (the demand side), green sukuk provide an attractive investment option for Western capital to be invested in emerging markets. These emerging markets typically offer better growth and higher yield opportunities compared to the lower growth (UNDP, 2021).

Despite the opportunities that Indonesia has, Indonesia also faces challenges regarding the green sukuk issuance. For instance, the estimated additional US\$30-50 billion by 2025 through green and sustainability sukuk requires focused efforts and targeted initiatives by institutions such as the UN Development Programme (UNDP), Principles for Responsible Investment (PRI), and Islamic Development Bank (IsDB), along with the support of multiple governments.

The green bonds can face reputational issues known as "greenwashing," where investors are concerned that issuers may not use proceeds for positive environmental impacts. Greenwashing is defined as activities that mislead consumers about sustainability practices (Ibrahim et al., 2021). This concern can lead to higher transaction costs due to the need for issuers to track, monitor, and report on the use of proceeds, obtain independent certification, and conduct periodic independent audits (UNDP, 2021).

Issuing green sukuk involves extra requirements and complexities beyond those already necessary for issuing standard sukuk, creating a dual layer of requirements. While these additional requirements can increase costs, the strong market demand for green sukuk suggests that investors are willing to accept these higher costs due to the benefits and appeal of investing in environmentally sustainable projects. This indicates a significant and growing interest in

green sukuk despite the added complexities and expenses involved (UNDP, 2021).

Another challenge within the Islamic finance industry is the lack of experience and depth of knowledge regarding ESG matters. There is also a lack of guidance for Shariah scholars on considering ESG matters as part of their roles. It is recommended that organizations such as the Accounting and Auditing Organization for Islamic Financial Institutions take the lead in developing guidance for Shariah scholars.

## CONCLUSION AND RECOMMENDATION

Indonesia and Malaysia are the first countries issuing the green sukuk. Indonesia issued the first sovereign green sukuk, while Malaysia issued the corporate green sukuk initiated by Tadau Energy. Initially, Indonesia issued three types of sukuk, the global, Retail, and project-based green sukuk. Indonesia has its first corporate sukuk in May 2024 issued by Bank Syariah Indonesia.

The sovereign green sukuk issued by Indonesia are mostly utilized to finance the sustainable transportation by 32.39% share, followed by climate change resilience (28.09%), sustainable water and wastewater management (25%), renewable energy (4.92%), energy efficiency (4.8%), waste to energy and waste management (4.58%), and green building (0.22%). The projects financed by the green are chosen based on the criteria stated in Indonesia's Green Bond and Green Sukuk Framework.

Indonesia has limited corporate green sukuk compared to Malaysia. Indonesia has its first corporate sukuk in May 2024 issued by Bank Syariah Indonesia. The bond experienced oversubscription which means many investors are interested in investing in this new type of bond. The main problem in issuing corporate green sukuk in Indonesia is the lack of understanding

from market participants (Hania, 2022). The solutions for this issue are the education and government incentives. Indonesia can co-chair with other institutions to provide education and training regarding the issuance of green sukuk like what Malaysia did by engaging SCM and local credit rating agencies to foster collaboration and provide training on green finance rating and second-party assessments. As for the incentive solutions, the corporate can be encouraged to issue the green sukuk by the implementation of government's incentive. The government's incentive can motivate the corporate to learn more about green sukuk issuance and can assist in overcoming the expensive cost of issuing green sukuk (Hania, 2022).

Companies can consider issuing corporate green Sukuk with ijarah contracts due to the ease of their implications. There are two main sectors that are ideal to be financed by corporate green sukuk. They are renewable energy and green transportation. Green sukuk for renewable energy and green transportation projects can attract investors who have concerns about ESG. (Endri et al., 2022).

In leveraging the influence of green sukuk of Indonesia in the global market, Indonesia can learn from Malaysia by engaging with the international institutions and aligning the framework with the international framework. By doing so, the green sukuk of Indonesia can be more internationally accepted, this way can boost the international capital to be invested in Indonesia.

This research limits the study by conducting desk study to see the evolution of the Green Sukuk in Indonesia. The future research can conduct a more comprehensive study by analysing the financial ecology of the green sukuk and assessing the compliance of the green sukuk to the green bond framework and Islamic principles.

Moreover, the research can also be conducted regarding the contribution of the green sukuk to the global and local emission reduction goals.

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