

## GREEN SUKUK INNOVATION: DRIVING ECO-FRIENDLY INFRASTRUCTURE DEVELOPMENT IN INDONESIA

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### **Abstract**

*The potential of green sukuk, an Islamic finance product, to promote environmentally friendly infrastructure development in Indonesia is examined in this paper. The study examines how green sukuk complies with Islamic law, how well it draws in a variety of investors, and what legal and legislative frameworks are needed to support its expansion in Indonesia. A comprehensive approach to literature reviews is used in this research methodology. This research includes citations to a large number of academic sources, including recent academic publications. then using Newton's second law, a physics theory. is a quantitative explanation of the modifications to a body's motion that a force can cause. This law asserts that the Islamic Brand Personality is inversely proportional to the Policy Stakeholders and directly proportional to the Sustainable Finance that works on it. According to the research, green sukuk can be a useful instrument for funding environmentally friendly initiatives including low-emission vehicles, green buildings, and renewable energy while also assisting Indonesia in achieving its sustainability targets. To fully realize the potential of green sukuk in the nation, the report also emphasizes the necessity of tax breaks, public awareness initiatives, and a supporting regulatory framework*

**Keywords:** *Islamic Finance, Sustainable Finance, Green Sukuk.*

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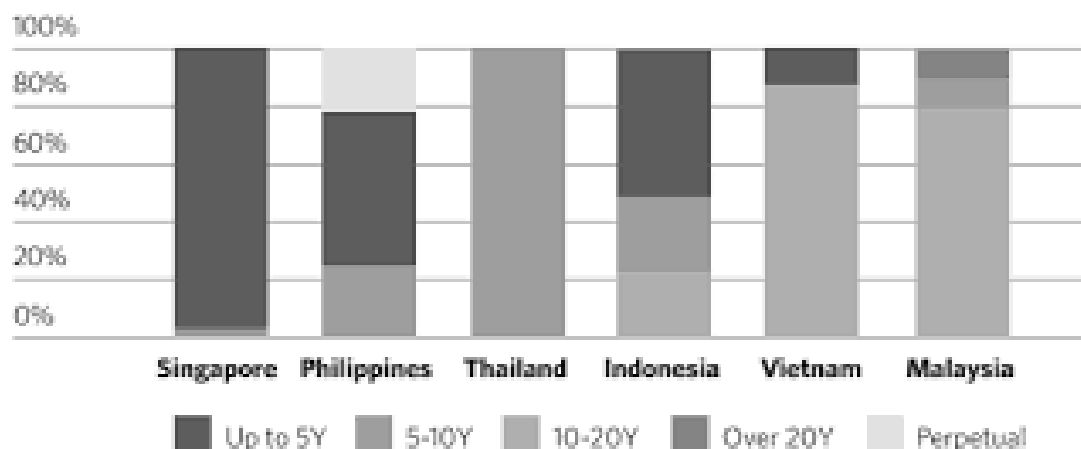
## INTRODUCTION

Global development is severely hampered by climate change and environmental deterioration, necessitating a change to more sustainable methods in many industries. In this regard, Islamic finance has drawn more attention as a possible means of funding sustainable development because of its emphasis on moral investing and social responsibility. Green sukuk is a cutting-edge tool in the Islamic finance ecosystem that may be used to finance infrastructure and projects that are more ecologically friendly.

Green sukuk has become a vital tool for funding sustainable energy, resilient infrastructure projects, and energy efficiency efforts as a result of the global climate crisis, the expanding Islamic finance sector, and the growth of socially conscious investing. As a type of Islamic finance, green sukuk benefits the environment in addition to the parties involved. With a sizable Muslim population and a strong dedication to sustainable development, Indonesia might use green sukuk to promote environmentally friendly infrastructure initiatives.(Hariyani and others, 2020)

One of Southeast Asia's biggest economies, Indonesia, has a lot of opportunity to use green sukuk to further its sustainability goals. The nation has been aggressively pursuing green infrastructure projects and has set high goals for the production of renewable energy. However, the nation has trouble finding sufficient funding for these projects.

**Figure 1. Global Trends in Capital Market in Contributing to Sustainable Development**



Source OJK

The purpose of this essay is to investigate how green sukuk might support Indonesia's development of environmentally friendly infrastructure. The study looks into whether green sukuk is in line with Islamic principles, if it can draw in a variety of investors, and what legal and policy frameworks are needed to support its expansion in Indonesia.

Sukuk are financial certificates that signify ownership of underlying assets; they are also known as Islamic bonds. A specific type of sukuk called "green sukuk" is intended to fund initiatives that improve the environment, like energy efficiency, renewable energy, sustainable waste management, and green construction.

In the future, financing sustainable infrastructure will be a difficulty for Indonesia. Green sukuk, a sharia-based financial instrument intended to fund ecologically beneficial initiatives, is one of the alternatives provided (Araminta et al., 2022). To finance a range of green initiatives, the Indonesian government has introduced green sukuk instruments from 2018 (Rusydiana & Irfany, 2021). (Araminta et al., 2022).

The increased desire for socially conscious investments and the harmonization of Islamic finance principles with environmental sustainability are the main drivers behind the development of green sukuk. Islamic banking places a strong emphasis on asset-backed transactions, avoiding speculative activity, and distributing risks and profits fairly. Since green infrastructure projects usually entail long-term, physical assets with steady revenue flows, these concepts are ideal for funding them.

The market for green sukuk has grown significantly in recent years as a result of the issuance of these securities by a number of nations, notably Saudi Arabia, Indonesia, and Malaysia, to finance environmentally beneficial projects. The growth of the green sukuk market can help achieve the Sustainable Development Goals of the UN, especially those pertaining to affordable and clean energy, climate action, and sustainable cities and communities.

In order to address its enormous infrastructure development needs, Indonesia has been looking into a number of different financing possibilities. By offering a way to finance environmentally beneficial initiatives like renewable energy, green buildings, and sustainable transportation, green sukuk can be extremely helpful in tackling this problem. Through strategic policies including creating a strong legislative framework, providing tax incentives, and raising public awareness and literacy about this instrument, the government's role as a regulator is essential in fostering the growth of green sukuk.

By encouraging environmentally friendly enterprises and raising living standards, Indonesia's green sukuk issuance can help achieve the Sustainable Development Goals. Green sukuk can assist Indonesia reduce climate change, improve environmental protection, and promote inclusive economic growth by allocating cash to sustainable infrastructure.

## LITERATURE REVIEW

Although there isn't much research on green sukuk and how it might be used to promote sustainable infrastructure development in Indonesia, a few of studies have looked into how it might help with both financial and environmental issues. In addition to its capacity to draw in a wide range of investors, including those looking for environmentally conscious investment opportunities, researchers have emphasized how green sukuk aligns with fundamental Islamic principles, such as encouraging moral and socially conscious investments (Suwanan et al. 2022).

Additionally, research has examined the legislative and policy frameworks needed to support the expansion of Indonesia's green sukuk market. These studies have underlined the necessity of precise regulations, tax breaks, and public education initiatives in order to foster an atmosphere that supports this cutting-edge Islamic financial tool. The literature generally indicates that green sukuk can be a useful

instrument for funding environmentally friendly infrastructure projects in Indonesia; nevertheless, further investigation is required to comprehend the actual use and practical implications of this new financial solution. (Abdullah and others, 2022).

According to The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), sukuk can be classified into various forms based on its contract:

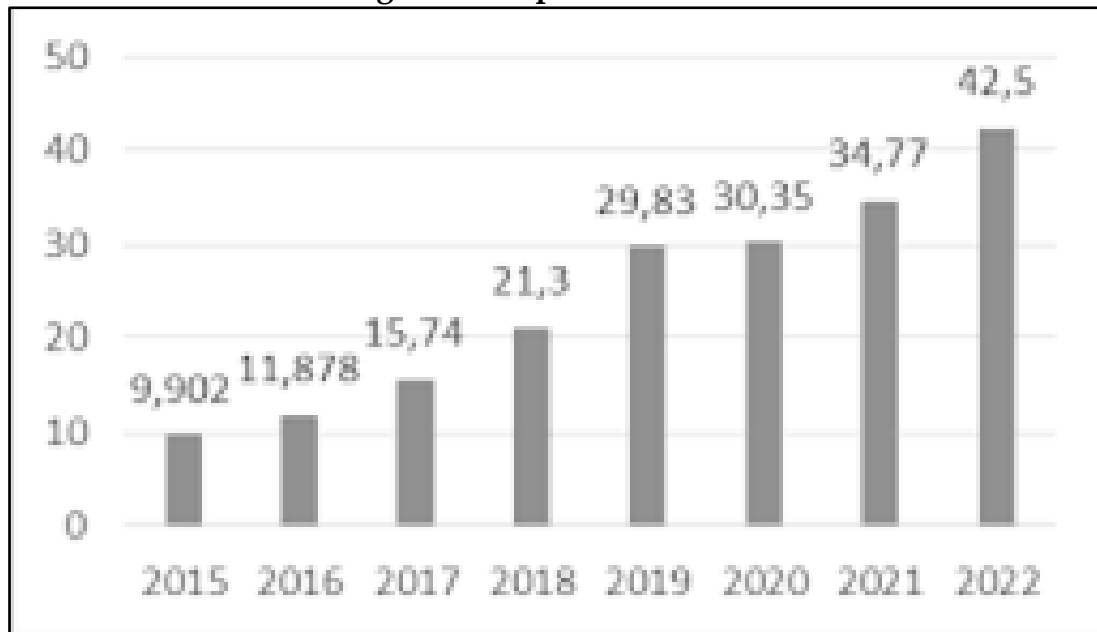
- 1) Sukuk issued in accordance with the ijarah contract is known as Sukuk Ijarah. The three types of Sukuk Ijarah are Sukuk ownership of leased tangible assets, Sukuk ownership of benefits, and Sukuk ownership of services.
- 2) Sukuk Mudharabah Sukuk is issued in accordance with a mudharabah contract or agreement in which one party contributes capital (rab al-maal) and the other party contributes labor and knowledge (mudharib). The earnings of the partnership will be distributed according to a predetermined ratio. All losses will be paid for by the person who provided the funding.
- 3) Sukuk Salam is a type of sukuk that is issued to raise finance for the salam contract, thereby granting the sukuk holder ownership of the commodities that will be supplied under the salam contract.
- 4) Sukuk Musyarakah is sukuk issued in accordance with a musyarakah contract or agreement in which two or more parties collaborate to pool funds in order to finance business operations, establish a new project, or develop an existing one. In accordance with each party's level of capital participation, profits and losses are shared.
- 5) Sukuk Istishna' is sukuk that is issued in accordance with an akadistishna', or agreement, in which the parties finance a project or items by agreeing to a sale and buy. According to the agreement, the project/goods' specs, cost, and delivery date are decided upon beforehand.
- 6) Sukuk Murabahah is a type of sukuk that is issued using the sale and purchase basis. The investor is the buyer of the commodity, and the sukuk certificate issuer is the seller.
- 7) Sukuk Wakalah refers to sukuk that symbolises a project or commercial activity that is overseen by a designated agent (representative) acting on behalf of the sukuk holder in accordance with a wakalah contract.
- 8) Sukuk Muzara'ah is sukuk that is issued to raise money to finance agricultural activities in accordance with the terms of the muzara'ah contract. As a result, sukuk investors are entitled to a share of the harvest. In accordance with the terms of the musaqah contract, sukuk holders are entitled to a share of the harvest.
- 9) Sukuk Musaqah is sukuk issued with the intention of using the funds from the sukuk issuance to carry out irrigation activities for fruiting plants, pay operational costs, and maintain the plants.

Two kind of sukuk are distinguished by the issuer or organization that issues them:

- 1) Corporate Sukuk are sukuk issued by businesses, including state-owned and private corporations.

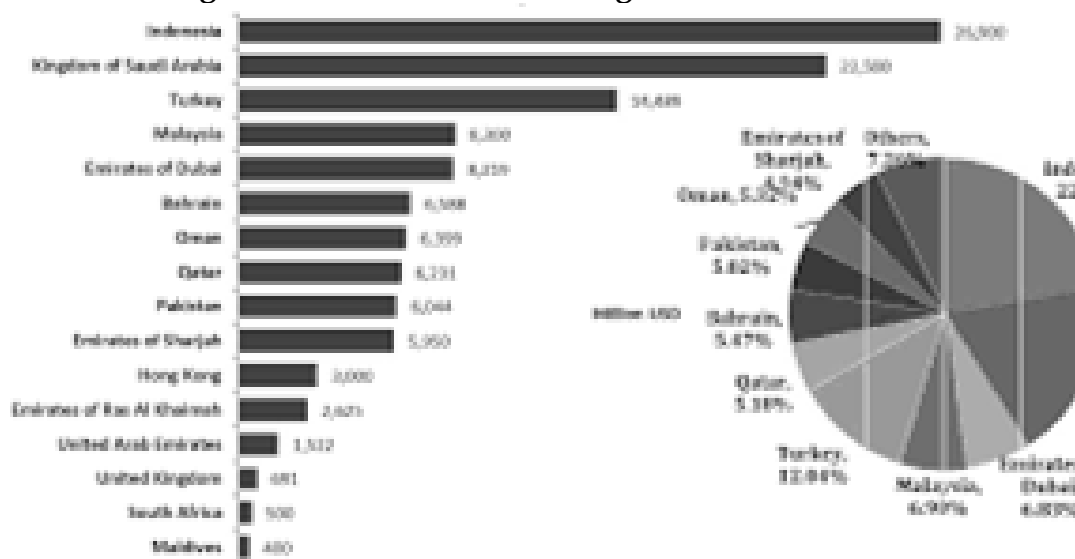
- 2) A sovereign sukuk is one that is issued by the government, in this example the Republic of Indonesia's Ministry of Finance.

**Figure 2. Corporation Sukuk**



Source UIR Journal

**Figure 3. International Sovereign Sukuk Issuance**

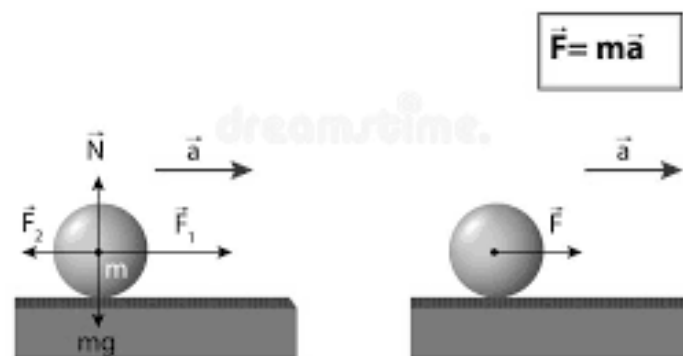


## METHOD

Newton's second law:  $F = ma$ . Newton's second law is a quantitative description of the changes that a force can produce on the motion of a body. It states that the time rate of change of the momentum of a body is equal in both magnitude and direction to the force imposed on it

This research methodology uses a thorough approach to literature reviews. Numerous scholarly sources, including contemporary scholarly articles, are cited in this study. then applying the physics theory of Newton's second law. is a quantitative description of the changes that a force can produce on the motion of a body. It states that the time rate of change of the momentum of a body is equal in both magnitude and direction to the force imposed on it. According to this law, This law states that Islamic Brand Personality is directly proportional to the Sustainable Finance that works on it and inversely proportional to the Policy Stakeholders. The application of this law can be seen in:

## NEWTON'S 2nd LAW



F = Sustainable Finance  
m = Policy Stakeholders  
a = Islamic Brand Personality

Additionally, a comparative analysis was conducted to benchmark Indonesia's green sukuk market against the experiences of other countries, such as Malaysia and the Gulf Cooperation Council nations, which have been pioneering the development of this Islamic finance instrument. This comparative approach helped identify best practices and lessons learned that could inform the further development of the green sukuk market in Indonesia.

## RESULT AND DISCUSSION

According to the study's findings, green sukuk offers Indonesia a potential chance to promote the development of sustainable infrastructure and deal with the nation's urgent environmental issues. An examination of Indonesia's current green sukuk issuances has demonstrated the beneficial effects these securities have had in funding environmentally friendly initiatives like sustainable transportation, green buildings, and renewable energy.

Key stakeholders' qualitative interviews brought to light how green sukuk aligns with Islamic beliefs and how investor demand for eco-friendly investment solutions is rising. In order to further stimulate the expansion of the green sukuk market in Indonesia, policymakers and industry professionals stressed the



significance of a favorable regulatory framework, tax incentives, and public awareness initiatives.

The comparison study with other innovative markets, such Malaysia and the countries of the Gulf Cooperation Council, has yielded insightful information about best practices and lessons learned that can guide Indonesia's ongoing growth of the green sukuk ecosystem. These findings suggest that with the right policy and regulatory support, green sukuk can be a crucial instrument for Indonesia to achieve its sustainable development goals and transition towards a greener, more resilient economy.

The study's conclusions lead to the following suggestions for maximizing green sukuk's potential for Indonesia's sustainable infrastructure development:

- Enhance the Regulatory Structure: The government ought to keep creating a thorough and unambiguous regulatory structure for green sukuk, offering rules on qualified projects, disclosure specifications, and certification procedures. This will support the expansion of the green sukuk market and boost investor confidence.
- Establishing Fiscal Incentives Tax incentives, such as tax exemptions or deductions for green sukuk issuers and investors, can be implemented to greatly increase the instrument's appeal and spur broader adoption.
- Boost Public Awareness and Financial Literacy: To inform investors, legislators, and the general public about the advantages and workings of green sukuk, targeted public awareness campaigns and financial literacy initiatives should be put into place. This will increase demand for these sustainable investment options and broaden the pool of potential investors.
- Encourage Collaboration and Knowledge Sharing: The green sukuk issuance process can be streamlined and best practices for successful implementation can be identified by promoting collaboration and knowledge sharing among important stakeholders, such as government agencies, financial institutions, infrastructure developers, and environmental experts.
- Create a Green Sukuk Ecosystem: The government should endeavor to create a comprehensive green sukuk ecosystem by incorporating complementing programs such environmental impact measurement frameworks, sustainable finance taxonomies, and green bond markets. This all-encompassing strategy can improve Indonesia's financial system's overall sustainability.
- By implementing these recommendations, Indonesia can unlock the full potential of green sukuk as a powerful tool for financing sustainable infrastructure, mitigating climate change, and achieving its broader sustainable development goals.

## CONCLUSION

According to Newton's second law law, This law states that Islamic Brand Personality is directly proportional to the Sustainable Finance (Green Sukuk) that works on it and inversely proportional to the Policy Stakeholders.

In conclusion, green sukuk offers Indonesia a viable chance to combat the climate issue and promote the development of sustainable infrastructure. Unlocking

the full potential of this cutting-edge Islamic financing product will depend heavily on the government's dedication to establishing a favorable regulatory environment and increasing public awareness of green sukuk.

Innovation in green sukuk is a calculated move by Indonesia to promote the development of ecologically friendly and sustainable infrastructure. The government uses this sharia-based funding to support environmental preservation in addition to infrastructure requirements. Indonesia can serve as a model for other nations looking to incorporate sustainability concepts into their national financial system by advancing the development and promotion of green sukuk.

## REFERENCES

- Abdullah, M. S., & Keshminder, J. S. (2022). What drives green sukuk? A leader's perspective. *Journal of Sustainable Finance & Investment*, 12(3), 985–1005. <https://doi.org/10.1080/20430795.2020.1821339>
- Abdullah, N., & Nayan, M. A. (2020). Green Sukuk: Financing The Future to Sustainable Environment. *International Journal of Zakat and Islamic Philanthropy*, 2(2), 14–23.
- Abubakar, L., & Handayani, T. (2020). Green Sukuk : Sustainable Financing Instruments for Infrastructure Development in Indonesia. *Advances in Social Science, Education and Humanities Research*, 436(April 2016), 983–987.
- Alqahtani, D. S. (2012). Redefining Sukuk as an InvestmentInstrument, Not a Debt One. *The Journal of Investing*, 21(4), 190–195. <https://doi.org/10.3905/joi.2012.21.4.190>
- Araminta, D. V., Qudziyah, Q., & Timur, Y. P. (2022). the Role of Green Sukuk in Realizing the Sustainable Development Goals 2030 Agenda. *Jurnal Ekonomi Dan Bisnis Islam (Journal of Islamic Economics and Business)*, 8(2), 251–266. <https://doi.org/10.20473/jebis.v8i2.37531>
- Aryal, J. P., Sapkota, T. B., Khurana, R., Khatri-Chhetri, A., Rahut, D. B., & Jat, M. L. (2020). Climate change and agriculture in South Asia: adaptation options in smallholder production systems. In *Environment, Development and Sustainability* (Vol. 22, Issue 6). Springer Netherlands. <https://doi.org/10.1007/s10668-019-00414-4>
- Azhgaliyeva, D., Kapoor, A., & Liu, Y. (2020). Green bonds for financing renewable energy and energy efficiency in South-East Asia: a review of policies. *Journal Jurnal Ekonomi dan Bisnis Islam*, Vol. 8, No. 2, July-December 2022 263 of *Sustainable Finance and Investment*, 10(2), 113–140. <https://doi.org/10.1080/20430795.2019.1704160>
- Fauziyah, N. L., Nabil, & Syah, A. (2022b). Analisis Sumber Literasi Keagamaan Guru PAI Terhadap Siswa Dalam Mencegah Radikalisme Di Kabupaten Bekasi. *Edukasi Islami: Jurnal Pendidikan Islam*, 11, 503–517.
- Hariyani, H. F., & Kusuma, H. (2020). Green Sukuk-Based Project on SustainableWaste Management in Indonesia. *Al Iqtishad*, 12(2).<https://doi.org/10.15408/aiq.v12i2.15129>





- Hudaefi, F. A. (2020). How does Islamic fintech promote the SDGs? Qualitative evidence from Indonesia. *Qualitative Research in Financial Markets*, 12(4), 353–366. <https://doi.org/10.1108/QRFM-05-2019-0058>
- ICMA. (2018). Green Bond Principles. Voluntary Process Guidelines for Issuing Green Bonds. The Green Bond Principles, June, 8.
- ILO. (2018). The employment impact of climate change adaptation. International Labour Organization (ILO) for the G20 Climate Sustainability Working Group (CSWG) under the Argentine G20 Presidency in 2018.
- ILO. (2021). ILO Monitor : COVID-19 and the world of work . Eighth edition Updated estimates and analysis Return to workplace and vaccination : Part I . Labour market developments in 2020 – 21 : Increasing disparities (Issue October).
- Liu, F. H. M., & Lai, K. P. Y. (2021). Ecologies of green finance: Green sukuk and development of green Islamic finance in Malaysia. *Environment and Planning: A Economy and Space*, 53(8). <https://doi.org/10.1177/0308518X21103834>
- Meo, M. S., & Abd Karim, M. Z. (2022). The role of green finance in reducing CO 2 emissions : An empirical analysis. *Borsa Istanbul Review*, 22(1), 169–178. <https://doi.org/10.1016/j.bir.2021.03.002>
- Moghul, U. F., & Safar-Aly, S. H. K. (2015). Green Sukuk: The Introduction of Islam's Environmental Ethics to Contemporary Islamic Finance. *THE GEORGETOWN INT'L ENVTL. LAW REVIEW*.
- Munir, S., Masruro, U., Fawaiq, A., & Merlinda, S. (2020). Green Sukuk: Indonesian Youth Investment Prospects for Environmental Sustainability. *Economics Business and Organization Research*, 140–147.
- Musari, K. (2021). Esham, the Origin of Sukuk for Facing the Crisis: Historical Experience. *IQTISHODUNA: Jurnal Ekonomi Islam*, 10(1), 45–58. <https://doi.org/10.36835/iqtishoduna.v10i1.945>
- Nehal, S. (2021). Green Sukuk–A Viable Global Financing option for Climatic and Environmental Revolution (A Practical Instrument for the Development of Sustainable Energy Projects .... *Journal of Socio-Economic and Religious Studies*, 1(2), 53–72.
- Norouzi, N., Zarazua de Rubens, G., Choubanpishehzafar, S., & Enevoldsen, P. (2020). When pandemics impact economies and climate change: Exploring the impacts of COVID-19 on oil and electricity demand in China. *Energy Research and Social Science*, 68(June), 101654. <https://doi.org/10.1016/j.erss.2020.101654>
- OECD. (2015). Policy Perspectives: Green Bonds - Mobilising the debt capital markets for a low-carbon transition. OECD Publishing, OECD/Bloomberg Philanthropies

