

## Development and Influence of Green Sukuk in Indonesia

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**Abstract :** *With the increasing attention to environmentally based development issues and sustainable development, the demand for the necessary financing to support greening projects continues to rise. The principles of investment in the context of Islamic finance synergistically align with environmentally friendly concepts and sustainable development. The presence of innovative Islamic financing instruments, such as Green Sukuk, in Indonesia is potentially and crucially significant in supporting economic growth that aligns with environmental conservation efforts. Although Green Sukuk has received a positive response from the market, there remain various opportunities for its development in Indonesia that need to be optimized, while also facing practical challenges that must be addressed. Therefore, this research will focus on exploring Green Sukuk, its development, and the impact of Green Sukuk in Indonesia.*

**Keywords:** *sustainable, finance, green sukuk, islamic.*

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## 1. Introduction

New York – In a High Level Panel discussion themed “Accelerating a Just, Green and Resilient *Economic Transformation: Circular Solutions and Partnerships*” organized by Partnership for Action on Green Economy (PAGE), Global Alliance on Circular Economy and Resource Efficiency, Global Fiscal Public Network and supported by several UN organizations including UNEP, at Scandinavia House 58 Park Ave in New York, United States. The event, which took place on July 17, 2023, became a forum for Ministers and Heads of Delegations attending the High-Level Political Forum on Sustainable Development 2023 including from Germany, the European Commission, and Sweden. This side event was a forum to exchange insights on the potential for global green economy transformation approaches including through circular economy approaches, innovative capacity and financial solutions, as well as South-South Triangular Cooperation (SSTC) and stronger partnerships to promote social and environmental justice. This activity will help accelerate and renew commitments to the SDGs to build resilience in a crisis-driven world.

Deputy for Maritime Affairs and Natural Resources and Head of the National Secretariat for SDGs of the Ministry of PPB/Bappenas, Dr. Vivi Yulaswati, M.Sc. was present representing the Minister of PPN/Head of Bappenas at the side event. On this occasion, Vivi Yulaswati said that in reaching the middle of the 2030 Agenda, the world is significantly off track in its efforts to achieve the SDGs. The COVID-19 pandemic has exacerbated the challenges faced in achieving the SDGs and further exposed vulnerabilities and inequalities in society, causing many people to be left further behind.

Vivi Yulaswati emphasized that one of the main challenges that must be addressed immediately is the gap in financing to achieve the Sustainable Development Goals (SDGs), which is estimated to reach USD 4.2 trillion annually. In addition, climate change is still a major threat to development in Indonesia. Therefore, stronger efforts and high commitment are needed to deal with climate change adaptation and mitigation, with the aim of maintaining global temperature increases below 1.5 degrees Celsius from pre-industrial levels in order to reduce the impact of global warming. This was conveyed by Vivi Yulaswati, who serves as Deputy for Maritime Affairs and Natural Resources and as Head of the SDGs National Secretariat, in her statement in New York.

Referring to this context, Vivi Yulaswati emphasized the importance of transformative policies to ensure collaboration between all parties to accelerate the achievement of the 2030 Agenda. She highlighted the efforts Indonesia is not only moving towards post-pandemic economic recovery, but also accelerating the country's economic growth. In essence, Vivi Yulaswati emphasized that in a green economy, it is important for countries to maintain economic growth, create jobs, and improve welfare without sacrificing the environment. She also highlighted the importance of partnerships to provide the means necessary for the transition to a green economy, such as financing and technology transfer, especially for developing countries. Yulaswati hopes that through the forum, the commitment to achieving the SDGs targets can be strengthened amidst today's critical challenges. (Anisa, 2023).

The implementation of a green economic system by the state can be a solution to achieve sustainable development goals. According to research conducted by Penny et al., the implementation of a green economy has the potential to make a significant contribution to increasing state revenue in Indonesia. The results of empirical studies indicate that state development must integrate a green system in the future, focusing on direction, policy, organization, region, capacity, and involvement of various parties as an optimal expansion strategy, in order to achieve environmentally sustainable Indonesian economic activities.

Green Sukuk has become an increasingly interesting topic in the context of sustainable economic development in Indonesia. As a financial instrument that combines sharia principles with sustainable development goals, Green Sukuk offers the potential to accelerate investment in environmentally friendly projects. In this context, it is important to explore the influence and development of Green Sukuk in Indonesia, both in terms of raising funds for green projects and in providing positive impacts to the economy as a whole. By understanding the role and potential of Green Sukuk, we can better understand its contribution to sustainable development efforts in Indonesia.

The use of sharia-based financial instruments that focus on sustainable development, such as Green Sukuk, has attracted significant attention in Indonesia. Green Sukuk not only provides alternative financing that is in accordance with sharia principles, but also leads to sustainable investment in environmental projects. In this context, it is important to carefully examine the influence and development of Green Sukuk in Indonesia. This analysis includes an understanding of how Green Sukuk contributes to fundraising for green projects and its impact on the economy as a whole. With a deep understanding of the role and potential of Green Sukuk, we can strengthen the sustainable development strategy in Indonesia. However, it is necessary to know the extent of the impact or influence provided by green sukuk, as well as how green sukuk develops in Indonesia.

## 2. Research methods

The research method used in this article is library research with a descriptive approach. In this study, the author attempts to analyze current issues related to sustainability reports published by Islamic financial institutions. Data collected from books, articles, the internet, and the like that can help the author to analyze the topics discussed.

## Results and Discussion

### Green Sukuk

Green Sukuk is an Islamic financial instrument used to fund projects that have a positive impact on the environment. They are a sharia-compliant alternative to conventional bonds, giving investors the opportunity to invest in projects that align with their environmental values.

Indonesia has been a pioneer in issuing green sukuk, with a total of USD6.9 billion issued since 2018, making it the largest country in green sukuk issuance and a leader in the sovereign green sukuk market. The funds from these sukuk are used to finance various

environmentally friendly projects, such as renewable energy, energy efficiency, sustainable transportation, waste management, and resilience to climate change.

The Indonesian government is determined to continue issuing more green sukuk in the future, as a step to reduce greenhouse gas emissions, build a sustainable economy, and create a better future, not only for Indonesian citizens but also for the whole world.

Islamic finance is known for prohibiting certain financial practices such as interest charges or supporting industries that are prohibited by religious teachings (Pollard and Samers, 2007; Rethel, 2011). These prohibitions aim to improve the welfare of society in general and promote justice (Obaidullah, 2017; Visser, 2013). As a result, many Islamic scholars, financial practitioners, and environmental think tanks have argued that Islamic finance is naturally aligned with the principles of green finance that aim to direct investment to projects that provide environmental benefits (Ahmed et al., 2015; Obaidullah, 2017; RFI, 2018; UNPRI, 2017). One of the main principles of Islam is *wasatiyyah* which emphasizes the importance of maintaining the balance of the universe, which includes avoiding waste, luxury, and corruption. Islam prohibits destructive practices, including interest/*riba*, uncertain or misleading contracts (*gharar*), and gambling (*maysir*) (RFI, 2018).

Thus, according to this framework, businesses must meet human needs within the framework of a sustainable and efficient economic system. Financial activities that cause damage, including environmental degradation, are also prohibited (Obaidullah, 2017; RFI, 2018). Given the challenges of climate change, environmental degradation, and the humanitarian crises that follow, Islamic scholars emphasize that Islamic finance should contribute to environmental conservation and climate action (Obaidullah, 2017). Green Sukuk, with its specific structural requirements and philosophy that emphasizes economic, environmental, and Islamic values simultaneously, has the potential to address some of the issues faced by Green Sukuk. (Liu & Lai, 2021)

Sustainable financing is considered an optimal strategy to reduce CO2 emissions, according to Meo and Karim (2021). Environmental responsibility lies not only with the state, but also with companies and corporations, as an effort to fulfill their responsibilities not only to shareholders, but also to other parties affected by the company's activities, such as society and the environment. Several studies have shown support for the existence of Green Sukuk while many studies have highlighted its potential, especially in the context of sustainability. According to Abubakar (2020) and others, green sukuk has great potential in supporting sustainability efforts. (Hania et al., 2022)

Researchers show that the increasing trend of green sukuk has significant potential in various aspects. In addition to supporting sustainable development, green sukuk also has the potential to encourage business growth, become an instrument for environmental waste management, support renewable energy, and even as additional revenue for the state budget which often experiences a deficit.

Risanti (2020) stated that her research findings indicated the important role of green sukuk in supporting sustainable development. Several other studies discussing green investment, companies and sustainable financing show that green investment from companies can provide additional benefits to the company. In the context of the company itself, several

investment instruments have been introduced, such as stocks, bonds, or sukuk. PT. Indosat, Tbk. became a pioneer as the first company in Indonesia to take this step. (Hania et al., 2022)

### **The Development of Green Sukuk in Indonesia**

Global Sukuk (SNI) 2022 Sovereign Green Sukuk in the Global Market in the year Amidst challenging market conditions, the Government successfully conducted a Global Sukuk sale transaction of US\$3.25 billion consisting of US\$1.75 billion with a 5-year tenor and US\$1.5 billion with a 10-year tenor (Green series with Wakalah agreements maturing in 2027 and 2032). The transaction attracted great interest from various types of investors from various geographies. This shows strong investment interest in Indonesia due to continued investor support and Indonesia's strong economic fundamentals.

Some of the important achievements of this issuance include the largest Global USD Sukuk transaction from the Government, the largest Green Sukuk ever printed globally, the largest issuance from Indonesia this year and the first Green Sukuk with a tenor of 10 years by Indonesia. As part of the government's sukuk issuance program in the global market, in 2022 Green Sukuk was also offered which has been routinely started since 2018. The issuance in 2022 set a record as the largest Green Sukuk ever issued globally. This issuance proves the Government's long-term dedication and commitment to green and sustainable financing, as part of its efforts to combat climate change.

The Green Sukuk issued in this offering is the fifth global Green Sukuk from the Government and the first issued since the Government issued the SDGs Government Securities Framework in August 2021. The issuance of green sukuk in the global market in 2022 solidifies Indonesia's position as the largest issuer of Global Green Sukuk in the world in 2022. Based on the Green Sukuk impact report, from the issuance of Green Sukuk since 2018, it is projected that there will be a decrease in greenhouse gas emissions of 10.42 million tons of CO<sub>2</sub>, an additional capacity of environmentally friendly power plants of 7.36 kWh, 8.51 million households benefiting from better waste management, and other environmentally friendly projects. achievements of green sukuk in 2022 (OJK, 2022)

In recent years, the global green bond market has experienced rapid development. Seeing this opportunity, the Ministry of Finance has taken steps to develop new and innovative instruments to support financing for green projects. Since 2018, the Indonesian Government has successfully entered this market by issuing a global Green Sukuk worth a total of USD 5 billion. In 2022, the Government recorded a historic achievement by issuing the largest Green Sukuk ever globally, including becoming the largest issuer of Global USD Sukuk and the first to issue Green Sukuk with a tenor of 10 years.

The Indonesian Government has consistently fulfilled the annual reporting requirements of Green Sukuk in accordance with the Green Bond and Green Sukuk Framework, which has been carried out four times since 2019 to 2022. The issuance of Green Sukuk has had a significant positive impact with a projected reduction in emissions reaching more than 10 million tons of CO<sub>2</sub>e from the first four issuances.

This event is a follow-up to the 'Green Sukuk High Level Working Group' initiative launched at COP26 by Finance Minister Sri Mulyani Indrawati and Finance Minister HM John Glenn.

Although there are some challenges, such as public awareness of this new financial product and the need to create a balance between green sukuk and conventional finance, the opportunities are also very large. The global sukuk market has grown exponentially from US\$85 billion in 2016 to US\$172 billion in 2020. Green Sukuk not only supports the achievement of the Sustainable Development Goals (SDGs), but also finances projects that are in line with Nationally Determined Contribution (NDC) targets.

Indonesia has led by example in issuing the world's first green sukuk and the world's first retail green sukuk. To ensure the sustainability of green projects, Indonesia has developed and implemented a Climate Budget Tagging system. Thus, the funds collected can be directly allocated to green activities. The issuance of green sukuk has successfully raised more than US\$3.9 billion to finance government green projects, while also strengthening Indonesia's position in the global Islamic financial market. (Fiskal, 2020)

Green bonds, or Green Bonds, are financial instruments issued by companies or governments to fund projects that fall into the environmentally friendly category. Although they have similar financial characteristics to conventional bonds, green bond issuances must comply with certain certifications, such as the Green Bond Principles (GBP). Green bond issuances have been carried out by various government and private institutions around the world since 2007, with total accumulated issuance reaching USD 521 billion by the end of 2018.

Investors in green bonds come from a variety of backgrounds, from Environmental, Social, and Governance (ESG) Specialist investors to general investors. Some of the companies involved in green bond issuances are Aviva, BlackRock, Natixis, Mirova, Barclays, and Apple. In Europe and the United States, companies with a focus on environmental sustainability play an important role as major investors in green bond issuances.

In addition to targeting institutional investors, green bond issuance has also begun targeting individual investors through retail green bond issuance. This is supported by the increasing market share of retail investors in sustainable investment products in recent years. Several countries that have issued retail green bonds include Japan, Canada, New Zealand, South Africa, and the United States. Private companies such as CoPower (Canada) and Nedbank (South Africa) are also involved in retail green bond issuance. The value of retail green bond issuance in 2018 experienced a significant increase, indicating great interest from retail investors in the environmentally focused capital market.

In Indonesia, the government of the Republic of Indonesia through the Ministry of Finance has also issued three series of green bond instruments with a green sukuk structure. Green sukuk is a green bond instrument issued in accordance with Islamic sharia principles. The first green sukuk was issued in 2018 worth USD 1.25 billion.

The first issuance of green sukuk was oversubscribed by 2.5 times the offering value, indicating demand that exceeded expectations. Then, the second issuance was carried out in 2019 with an issuance value of USD 750 million, also aimed at international institutional investors.

In November 2019, the Government of the Republic of Indonesia began expanding green financial inclusion to retail investors by issuing retail green sukuk through the ST-006 series. This sukuk is specifically targeted for sales to domestic retail investors in Indonesia. This issuance managed to absorb IDR 1.4 trillion and was dominated by millennial investors.

Nevertheless, retail green sukuk issuance in Indonesia still has the potential to develop both through issuance by the government and the private sector. Therefore, this study aims to analyze retail green sukuk issuance from a demand perspective. The analysis includes an evaluation of retail green sukuk issuance ST-006, the impact of the issuance, the risks faced, the monitoring and reporting process, and the prospects for retail green sukuk issuance in the future. In addition, this study will also provide recommendations regarding opportunities for retail green sukuk issuance in the future.

ESG, which stands for Environment, Social, and Governance, is a new dimension that is developing from Socially Responsible Investments (SRI). SRI is a global investment movement that aims to realize ethical values, protect the environment, and improve social conditions.

As a development of SRI, ESG focuses more on environmental, social, and governance factors as additional indicators to evaluate company performance. Environmental factors include company concerns about waste, pollution, resource depletion, greenhouse gas emissions, deforestation, and climate change. Social factors consider how a company treats its human resources, including employee relations and diversity, working conditions, support for local communities, health, safety, and internal conflict resolution. Governance factors consider company policies and how the company is governed.

The development from SRI to ESG emerged because businesses have the potential to pose risks to environmental damage, especially to ecosystems, water, air, and human health. ESG implementation includes corporate strategies in responding to climate change, water management, health policies,

and safety. Most CEOs of companies in Hong Kong acknowledge that adherence to ESG commitments has a positive impact on their business development. From an investor perspective, ESG investment growth is growing faster than SRI investment, although SRI has been known earlier. ESG investment is estimated to have reached more than USD 22.8 trillion in Assets Under Management (AUM) in 2016, increasing to USD 33.6 trillion in 2018. More than 84% of investors expressed their readiness to consider integrating ESG criteria into their investment portfolios.

#### **SDGs (Sustainable Development Goals)**

The concept of Sustainable Development Goals (SDGs) was first adopted at the UN General Assembly on September 25, 2015 in the United States. SDGs include seventeen goals that emphasize development for countries around the world. For developed countries, SDGs are intended to reduce inequality and excessive consumption and production. On the other hand, for developing countries, SDGs are an effort to reduce poverty levels while improving the quality of health, education, protection of marine and forest ecosystems, sanitation, and availability of drinking water.

Before the formulation of SDGs, it is important for countries in the world to agree on funding as the key to the successful implementation of sustainable development, both for developing and developed countries. This commitment is reflected in the Addis Ababa Action Agenda (AAAA) issued in July 2015 at the United Nations Third International Conference on Financing for Development. In the conference, 174 countries and private institutions such as development banks, UN organizations, economic commissions, and non-governmental organizations participated.

One of the funding strategies agreed upon in the Addis Ababa Action Agenda is blended financing, which is a funding collaboration between the government and the private sector. Blended financing aims to provide incentives for non-governmental institutions to engage in programs related to the implementation of sustainable development. This scheme also emphasizes fair sharing of risks and benefits of activities between the government and the parties involved.

However, to date, there is still a gap in funding to achieve the SDGs in developing countries, with an estimated need of USD 2.5-3 trillion per year. This condition, especially in Indonesia, encourages the government to develop new financing strategies as an effort to accelerate the achievement of the SDGs.

### **Impact of Green Sukuk in Indonesia**

Projected Environmental and Social Impacts The following impact data is collected from projects funded by Global Green Sukuk 2022, Project-Based Sukuk 2022, Retail Green Sukuk 2022, and Retail Green Sukuk 2021

1. Renewable energy,
  - a. Contributing to the reduction of greenhouse gas emissions by 130,316.39 tons of CO<sub>2</sub>e annually from the installation of rooftop solar panels and marine navigation device assistance.
  - b. Providing energy efficiency, simplifying shipping navigation, and improving shipping safety.
2. Resilience to Climate Change
  - a. Projections to increase the service capacity of raw water structures and infrastructure to achieve the national standard target of 4.10 m<sup>3</sup>/second through the construction/rehabilitation of 685 raw water units and 50 km of groundwater irrigation networks, providing benefits to areas vulnerable to flooding and drought.
  - b. Reducing the vulnerability of urban and coastal areas prone to flooding through the development and rehabilitation of 233 km of river flood control structures and 98 km of coastal protection structures in the provinces served.
3. Sustainable transportation  
The development of railway infrastructure and facilities has not significantly contributed to the reduction of greenhouse gas emissions due to the downward trend in the use of public transportation due to social restriction policies and changes in lifestyle and movement patterns during the COVID-19 pandemic.
4. Sustainable management of natural resources on land  
Participate in ecosystem restoration through forest and land rehabilitation in North Sulawesi province, especially in the Likupang special economic zone.
5. Eco-friendly building  
Establishing an environmentally friendly building model through the construction of university facilities and infrastructure in accordance with building technical standards and green building principles.
6. Energy from Waste and Waste Management  
Improving municipal solid waste management, with projected benefits for a total of 3.7 million people.
7. Sustainable Water and Waste Management  
Increasing the capacity of water supply services for ±284,628 hectares of agricultural areas vulnerable to flooding and drought through the development/rehabilitation of 33 irrigation area units together with a surface water/wetland/coastal irrigation network of 1,158 km.
  - a. Increasing the storage capacity of natural and artificial reservoirs by ±4,482 million m<sup>3</sup> through the development and rehabilitation of 447 small and large dams, 18 lakes, and 119 rainwater reservoirs (embung).
  - b. Increasing the capacity of wastewater treatment services by around 150 - 1,100 liters per second, and wastewater treatment capacity through the construction/rehabilitation of water treatment plants and household connections. (Ministry of Finance Republic of Indonesia, 2023)

### **SDGs Government Securities Framework**

The concept of Sustainable Development Goals (SDGs) was formalized at the UN General Assembly held on September 25, 2015 in the United States. The SDGs include seventeen goals designed to promote sustainable development worldwide. For developed countries, the SDGs focus on reducing inequality and excessive consumption and production. For developing countries, the SDGs aim to reduce poverty levels and improve the quality of health, education, protection of marine and forest ecosystems, and improving sanitation and access to clean water. (Study on Retail Green Sukuk in Indonesia, 2020)

The issuance of Indonesian Green Sukuk began with the development of the Republic of Indonesia Green Bond and Green Sukuk Framework in 2017. This Framework detailed 9 eligible sectors, project selection process, results management, and Sukuk reporting. In 2021, this Framework was revised and enhanced to become the Indonesian Government Bond Framework Oriented towards Sustainable Development Goals (SDGs). The SDGs Framework reflects the Government's intention to issue Green and Blue Bonds and Sukuk, and Social and Sustainable Bonds, collectively referred to as Green Bonds and SDGs, to fund projects that deliver environmental and social benefits that support the Republic in achieving its 2030 sustainable development and climate change agenda.

One of the key changes to the SDGs Framework lies in the categories of eligible sectors and the expanded criteria for projects with a Green and Blue Focus that can have shared social benefits, and those with a Social Focus that can have shared green benefits.

As with the Green Bond and Green Sukuk Frameworks, the SDGs Framework has completed an independent assessment against international market standards by CICERO and IISD. This evaluation confirmed that the Framework is in line with the green bond principles, social bond principles, and sustainability bond guidelines. Recognizing the overall objectives, procedures, and governance of Indonesia reflected in the Framework, CICERO assigned a grade of "Green Medium" and "Good" for overall governance. With this enhancement, issuances in 2022 and beyond will accurately follow the SDGs Framework.

#### 1. Selection Procedure Process

In the Framework, it is stated that the Green Sukuk project selection procedure follows the Climate Budget Tagging (CBT) mechanism. The CBT system has been integrated into the government's national budget system (ADIK system in 2016 and KRISNA system in 2018) - and is designed to track and identify ministry expenditures/projects that contribute to climate change mitigation and adaptation, in line with Indonesia's climate change targets. Green projects eligible for financing or refinancing by Green Sukuk are selected from tagged projects that fall under the Green and Blue Focus that are eligible under the SDGs Framework. The Ministry of Finance selects projects that are in line with the Green Sukuk tenor. The impacts of each project—both environmental and non-environmental (social) impacts—are assessed and measured by each ministry as the project owner together with the Ministry of National Development Planning, and verified by the Ministry of Environment and Forestry to ensure consistency with the National Action Plan to Reduce Greenhouse Gas Emissions (RAN-GRK), the National Action Plan for Climate Change Adaptation (RAN-API), and the Nationally Determined Contribution (NDC).

Assessments use internationally accepted methodologies, where possible. After verification by the Ministry of Environment and Forestry, the projections of greenhouse gas emission reductions and performance of resilience indicators will be registered in the National Registration System for Climate Change Control (SRN).

#### 2. Management of Proceeds

The SDGs Framework indicates that proceeds from Green Sukuk should be managed in the government's general account. The proceeds are credited to an account designated by the relevant ministry to exclusively finance projects, as defined in the Framework. Proceeds that have not been allocated to eligible green projects are held in cash in the government's general account at Bank Indonesia (Bank Sentral Republik Indonesia). The Ministry of Finance actively manages the process of allocating proceeds from Green Sukuk and is responsible for ensuring that the proceeds are properly directed and used for investments in accordance with the Framework. Ministries/agencies using the proceeds from Green Sukuk monitor and report the impact of eligible green projects in their portfolios to the Ministry of Finance.

### **Republic of Indonesia SDGs Government Securities Framework**

Incorporating SDGs into the 2020-2024 Medium-Term National Development Plan, and adapting to changes in the Green, Social and Sustainability (GSS) bond market. Following the success of Green Sukuk issuances since 2018, a wider range of Green and Social projects have been identified as having a closer relationship with the SDGs—thus

making them suitable to be identified as SDG Bonds. This responds to the growing trend among investors who are increasingly adopting a holistic approach to sustainability and embedding the SDGs into their investment portfolios.

In 2021, the Government of Indonesia developed the SDGs Indonesia Government Bond Framework (SDGs Framework) to demonstrate its intention to issue Green and Blue Bonds as well as Sukuk, and Social and Sustainability Bonds and Sukuk under a common framework. The SDGs Framework is an extension of the existing Green Bond and Green Sukuk Framework with the inclusion of Blue and Social Focus, in addition to the existing Green Focus. The SDGs Framework allows financing and refinancing of projects under 14 eligible sectors, 10 from Green and Blue Focus and 4 from Social Focus. Future issuances of the GSS Bonds will follow the SDGs Framework.

### **Project**

To ensure that Green Sukuk investments generate sustainable environmental and/or social outcomes in addition to financial returns, the Government of Indonesia is committed to transparent reporting on the amount of proceeds allocated and used as well as the environmental and social impacts and progress of green projects selected as underlying assets, in accordance with the Indonesian Government Bond Framework SDGs.

The Green Sukuk impact report leverages the established national development planning and budgeting system. As mentioned above, the proceeds from the 2022 Global Green Sukuk were allocated to refinance green projects from Fiscal Year 2021 and finance green projects from Fiscal Year 2022, while the proceeds from the 2022 Project-Based Green Sukuk were used to refinance the Government's green projects from Fiscal Year 2021 and 2020. As for the Retail Green Sukuk, the proceeds from the 2022 retail issuance were used to refinance the Government's green projects in Fiscal Year 2020, while the proceeds from the 2021 retail issuance were allocated to refinance green projects from Fiscal Year 2020 and finance green projects from Fiscal Year 2021. The underlying projects, allocated budgets, and performance reporting data were extracted from the performance-based budgeting system (ADIK system 2016, revised to KRISNA system 2018).

The data mentioned in this report are data that have been identified and tagged as projects contributing to climate change mitigation and adaptation through the Climate Budget Tagging (CBT) mechanism. This mechanism is managed and implemented by ministries/agencies, with reference to the national mitigation and adaptation policy documents in each agency. The budget data collected consists of budget limits and realizations, as well as expected outputs and further clarifications from the relevant ministries/agencies, as project owners. The review and approval process is synchronized by the Ministry of Finance and the Ministry of National Development Planning. Project outputs, environmental benefits, and other outcomes are then verified and validated by the Ministry of Environment and Forestry and the Ministry of National Development Planning. For refinancing projects (2021), the data reported is based on figures audited by the Republic of Indonesia Audit Board as of May 30, 2022 for accountability purposes. However, for 2022 projects, the data reported is the amount allocated and committed until December 31, 2022.

Selected and reported projects will be registered with the National Registration System on Climate Change Control (SRN). SRN is under the Ministry of Environment and Forestry, as the national focal point for UNFCCC, which aims to be a data and information management platform for mitigation and adaptation activities in Indonesia.



1. The projects financed by the 2022 Global Green Sukuk issuance are projects implemented in 2022. As of December 31, 2022, the total amount allocated for financing is 25% of the proceeds of the 2022 Global Green Sukuk issuance (USD 1.5 billion). Any amount exceeding the proceeds of the Green Sukuk will be financed from other sources of funds available in the general cash account.
2. The projects refinanced by the 2022 Global Green Sukuk issuance are projects implemented in 2021. As of December 31, 2022, the total amount allocated for financing is 75% of the proceeds of the 2022 Global Green Sukuk issuance (USD 1.5 billion). Any amount exceeding the proceeds of the Green Sukuk will be financed from other sources of funds available in the general cash account.
3. Financing of the 2021 Global Green Sukuk Issuance Projects are projects implemented in 2021. As of December 31, 2021, the total amount allocated for financing is 49.05% of the proceeds of the 2021 Global Green Sukuk issuance (USD 750 million). Any amount exceeding the proceeds of the Green Sukuk will be financed from other sources of funds available in the general cash account.
4. Refinancing Projects of the 2020 Global Green Sukuk Issuance are projects implemented in 2018. As of December 31, 2020, the total amount allocated for refinancing was 51% of the proceeds of the 2020 Global Green Sukuk issuance (USD 750 million). Any amount exceeding the proceeds of the Green Sukuk will be financed from other sources of funds available in the general cash account.
5. Financing Projects from the 2019 Retail Green Sukuk Issuance are projects implemented in 2019. As of December 31, 2020, the total amount allocated for financing is 100% of the proceeds from the 2019 Retail Green Sukuk issuance (USD 104.4 million). Any amount exceeding the Green Sukuk proceeds will be financed by other sources of funds available in the general cash account.
6. Refinancing Projects of the 2019 Global Green Sukuk Issuance are projects implemented in 2017. As of December 31, 2019, the total amount allocated for refinancing is 51% of the proceeds of the 2019 Global Green Sukuk issuance (USD 750 million). Any amount that has been committed (realized) and exceeds the Green Sukuk proceeds will be financed by other sources of funds available in the general cash account.
7. Financing Projects from the 2018 Global Green Sukuk Issuance are projects implemented in 2018. As of December 31, 2018, the total amount allocated for financing new projects was 54.7% of the proceeds of the 2018 Global Green Sukuk issuance (USD 1.25 billion). Any amount that has been committed (realized) and exceeds the Green Sukuk proceeds will be financed by other sources of funds available in the general cash account.

Notes:

- a. The project type refers to 15 eligible sectors in the Indonesian Government Debt Securities Framework SDGs.
- b. Projects can be implemented in several locations mentioned.
- c. Stating a limited guarantee from KAP PSS - EY on the amount pledged for green projects. The Indonesian Government Bond Framework SDGs which is the basis for assessing the allocation of the pledged amount is available at <https://www.djppr.kemenkeu.go.id/governmentsecuritiesframework>. The currency exchange rate is based on the 2022 State Budget Assumption of IDR 14,350 per USD.
- d. Based on the financial age of the project.
- e. The methodology and assumptions are disclosed in the Appendix. Tbc: to be confirmed - related data will be provided in the next annual report.
- f. Additional indicators of the direct impact of green projects.
- g. The most relevant or direct impacts on social development and/or sustainability objectives, resulting from the project.

### **3. Conclusions and Suggestions**

Indonesia is strongly committed to achieving the Sustainable Development Goals (SDGs). The government has linked and integrated SDGs targets and indicators into the national medium-term development plan (RPJMN), which ensures the implementation of SDGs in the country.

As mentioned in the previous section of this report, the proceeds from Green Sukuk have contributing to achieving several SDGs, including No Poverty, No Hunger, Good Health and Well-Being, Gender Equality, Clean Water and Sanitation for All, Affordable and Clean Energy, Decent Work and Economic Growth, Industry, Innovation and Infrastructure, Reduced Inequalities, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action, Life Below Water and Life on Land.

Green sukuk has a good impact, but it would be better if green sukuk could develop more quickly, namely by socializing the community about green sukuk so that green sukuk can move quickly and massively, so that existing problems can be resolved immediately, not just having a small impact.

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