GREEN SUKUK

Allocation and Impact Report

2023

MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

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Foreword

The Minister of Finance of the Republic of Indonesia

The past few years have been filled with disruptive events that have had a significant impact on human history. The COVID-19 pandemic led to a "new normal" that was quickly interrupted by a war in Ukraine, causing crises in food and energy and undoing decades of progress. As we enter 2023, the world is facing a combination of new and familiar risks. Classical risks like inflation, trade wars, social unrest, and geopolitical conflicts have resurfaced, while new risks such as unsustainable debt levels, low growth, declining human development, rapid technological advancements, and the pressing issue of climate change are also shaping the future. These factors are creating an era of uncertainty and turbulence for the upcoming decade.

Climate change is one of the most pressing issues of our time. The effects of climate change are already being felt around the world, in the form of more extreme weather events, rising sea levels, and changes in agricultural patterns. Indonesia is particularly vulnerable to the impacts of climate change, due to its large population, geographic location, and reliance on natural resources. In response to the challenges posed by climate change, Indonesia has made a number of commitments to reduce its greenhouse gas emissions and to adapt to the impacts of climate change. One of these commitments is to issue green sukuk.

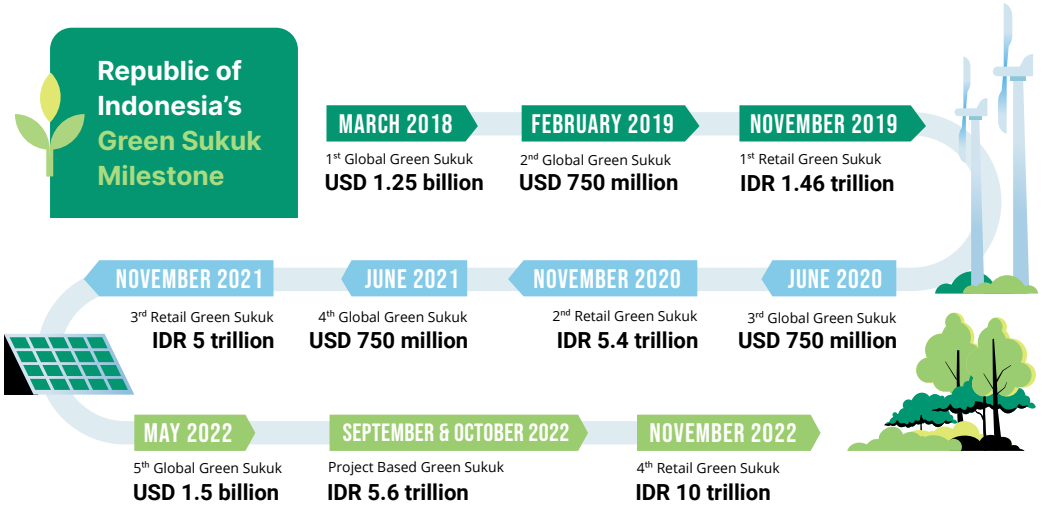
Green sukuk are Islamic securities that are used to finance projects that have a positive environmental impact. They are a Sharia-compliant alternative to conventional bonds, and they offer investors a way to invest in projects that are aligned with their environmental values. Indonesia was the first country to issue a sovereign green sukuk. Since 2018, Indonesia has issued a total of USD6.9 billion in green sukuk, which makes Indonesia the world's largest issuer of green sukuk, and a leader in the sovereign green sukuk market. The proceeds from this Sukuk were used to finance a wide range of climate-friendly projects, such as renewable energy, energy efficiency, sustainable transportation, waste management, and climate resilience. The Indonesian government is committed to issuing more Green Sukuk in the future. These Sukuk will help Indonesia to reduce its greenhouse gas emissions, build a more sustainable economy, and create a better future not only for all Indonesians but also for the rest of the world.

I am honored to present the publication of this 5th Green Sukuk Allocation and Impact Report. The report provides transparency and accountability on the environmental and social impacts of green sukuk issuances. The report also discusses the potential for green sukuk to play a larger role in financing Indonesia's climate change mitigation efforts in the future. I hope this report will contribute to the further development of Indonesia's green sukuk program, and to Indonesia's efforts to address climate change.

I would like to express my sincere gratitude for the valuable support of all parties involved in the completion of this report, including the Ministry of National Development Planning, Ministry of Environment and Forestry, Ministry of Transportation, Ministry of Public Works and Housing, Ministry of Energy and Mineral Resources, and the United Nations Development Programme.

SRI MULYANI INDRAWATI

Republic of Indonesia's Green Sukuk Milestone



Cumulative Green Sukuk issuance value: USD 6.9 BILLION

Global Green Sukuk:	Retail Green Sukuk	Project-based Green Sukuk
USD 5 billion	**IDR 21.86 trillion** (USD 1.495 billion)	**IDR 6.73 trillion** (USD 450 million)

Awards

2018

- **Asia Pacific Green/SRI Bond Deal of the Year** — Global Capital, Euromoney

2019

- **SRI Bond, Islamic Issue** — IFR Asia
- **SRI Capital Market Issue of the Year** — IFR Asia
- **Best ESG Deal** — Finance Asia
- **Green Bond Pioneer Award** — Climate Bond Initiative
- **Indonesia Deal of the Year** — Islamic Finance News
- **Sovereign Deal of the Year** — Islamic Finance News
- **Green Bond of the Year, Sovereign** — Islamic Finance News
- **Sovereign Sukuk/Best Green Sukuk** — The Asset Triple A

2020

- **International Islamic Finance Awards 2020** — The Asset Triple A
- **3G Best Green Initiative of the Year 2020** — Cambridge IFA

2022

- **Best Islamic Finance Deal** — Finance Asia

2023

- **Largest Green Sukuk in 2022** — Climate Bond Initiative

Executive Summary

a. Latest Issuances

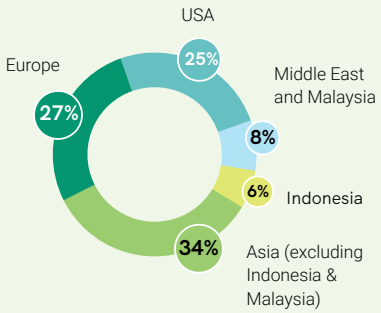
2022 GLOBAL GREEN SUKUK

Amount
USD 1.5 billion

Coupon
4.70%

Tenor
10 years

Distribution of investor



Key Achievements

The largest Green Sukuk tranche ever issued globally.

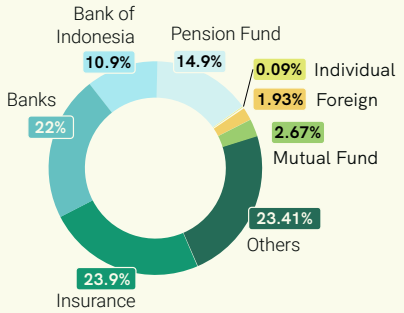
2022 PROJECT BASED GREEN SUKUK

Amount
IDR 6.73 trillion

Coupon
6.63%

Tenor
7 years

Distribution of investor



Key Achievements

The Government of Indonesia's first Project-Based Green Sukuk.

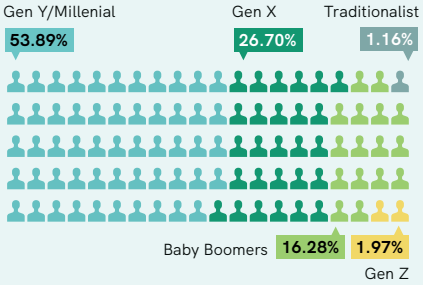
2022 RETAIL GREEN SUKUK (ST-009)

Amount
IDR 10 trillion

Coupon
6.15%

Tenor
2 years

Distribution of investor



Key Achievements

In terms of issuance amount and number of investors, ST009 was the largest ever issued throughout the non-tradable Retail Sukuk issuance history and the second largest in the history of non-tradable Retail Bond

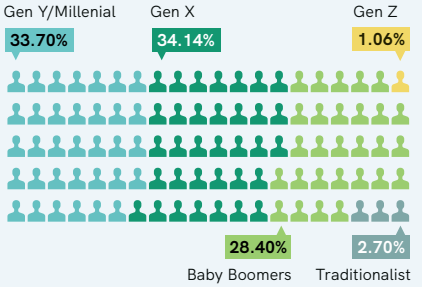
2021 RETAIL GREEN SUKUK (ST-008)

Amount
IDR 5 trillion

Coupon
4.80%

Tenor
2 years

Distribution of investor



Key Achievements

The 2021 issuance attracted the second largest number of investors amongst the non-tradeable retail bond issuances. The sales reached its target two days before the end of the offering period.

b. Use of Proceeds

2022 GLOBAL GREEN SUKUK ISSUANCE

Financing of 2022 Fiscal Year Projects
Refinancing of 2021 Fiscal Year Projects

Breakdown by Sector

- Renewable Energy: 0.17%
- Resilience to Climate Change: 4.21%, 20.42%
- Sustainable Transportation: 18.25%, 0.26%
- Green Building: 0.15%
- Sustainable Management of Natural Resources: 0.03%
- Waste to Energy and Waste Management: 0.15%
- Sustainable Water and Wastewater Management: 2.19%, 54.16%

Project Owner

- Ministry of Public Works and Housing
- Ministry of Transportation
- Ministry of Environment and Forestry

2022 PROJECT BASED GREEN SUKUK ISSUANCE

Refinancing of 2021 Fiscal Year Projects
Refinancing of 2020 Fiscal Year Projects

Breakdown by Sector

- Renewable Energy: 0.01%
- Resilience to Climate Change: 10.71%, 0.36%
- Sustainable Transportation: 0.05%, 4.84%
- Green Building: 0.96%
- Sustainable Water and Wastewater Management: 7.33%, 75.75%

Project Owner

- Ministry of Public Works and Housing
- Ministry of Transportation

2022 RETAIL GREEN SUKUK ISSUANCE (ST-009)

Refinancing of 2020 Fiscal Year Projects

Breakdown by Sector

- Resilience to Climate Change: 1.03%
- Sustainable Transport: 53.74%
- Sustainable Water and Wastewater Management: 45.22%

Project Owner

- Ministry of Public Works and Housing
- Ministry of Transportation

2021 RETAIL GREEN SUKUK ISSUANCE (ST-008)

Financing of 2021 Fiscal Year Projects
Refinancing of 2020 Fiscal Year Projects

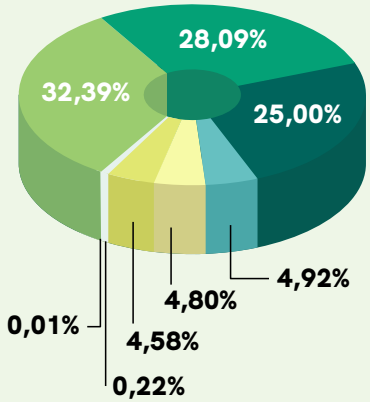
Breakdown by Sector

- Renewable Energy: 4%
- Resilience to Climate Change: 8%, 11%
- Sustainable Transportation: 46%
- Sustainable Water and Wastewater Management: 34%

Project Owner

- Ministry of Energy & Mineral Resources
- Ministry of Public Works and Housing
- Ministry of Transport

CUMULATIVE BREAKDOWN PER SECTOR (2018-2022)



- Sustainable Transportation
- Resilience to Climate Change
- Sustainable Water and Wastewater Management
- Renewable Energy
- Energy Efficiency
- Waste to Energy and Waste Management
- Green Building
- Sustainable Management of Natural Resources

Projected Environmental and Social Impacts

The following impact data are accumulated from the projects financed by the 2022 Global Green Sukuk, 2022 Project Based Sukuk, 2022 Retail Green Sukuk, and 2021 Retail Green Sukuk.

Renewable Energy

- Contribute towards annual GHG emission reduction of **130,316.39 tonnes CO2e** from the installations of rooftop solar PV and aids to sea navigation devices.
- Provide energy efficiency, streamline shipping navigation, and improve shipping safety.

Resilience to Climate Change

- Projected to improve the service capacity discharge of raw water structures and infrastructure to achieve the national standardised target at 4.10 m3/s from the construction/rehabilitation of 685 raw water units and 50 km groundwater irrigation network, benefitting areas prone to flood and drought.
- Reduce the vulnerability of urban and coastal areas prone to floodings from the development and rehabilitation of 233 km riverine flood control and 98 km coastal protection structures in the serviced provinces.

Sustainable Transportation

The railway infrastructure and facility development has yet to significantly contributed towards GHG emission reduction due to the declining trend in public transportation use as resulted from social restriction policies as well as the shift in lifestyle and movement pattern during the COVID-19 pandemic.

Sustainable Management of Natural Resources on Land

Contribute towards ecosystem restoration through forest and land rehabilitation in North Sulawesi Province, particularly the Likupang special economic zone.

Green Building

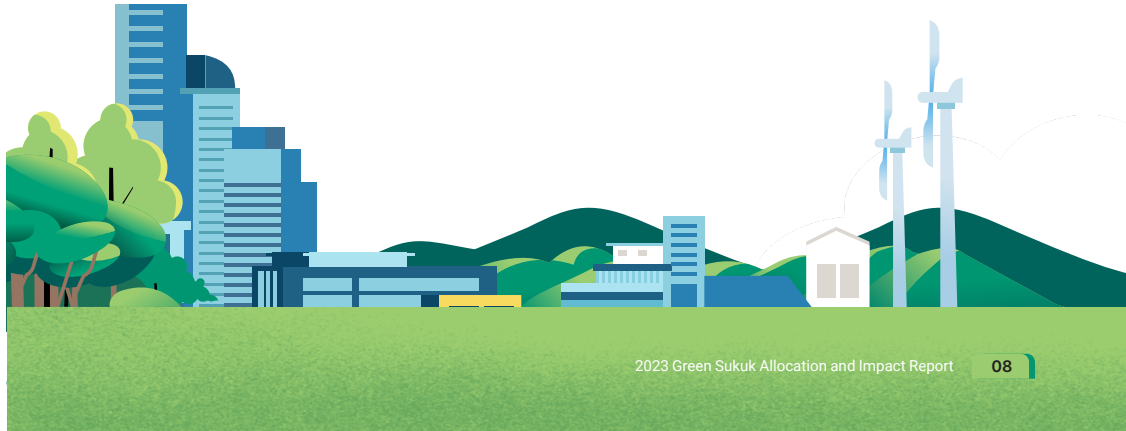
Set a green building model through the construction of university facilities and infrastructure in accordance with the building technical standards and green building principles.

Waste to Energy and Waste Management

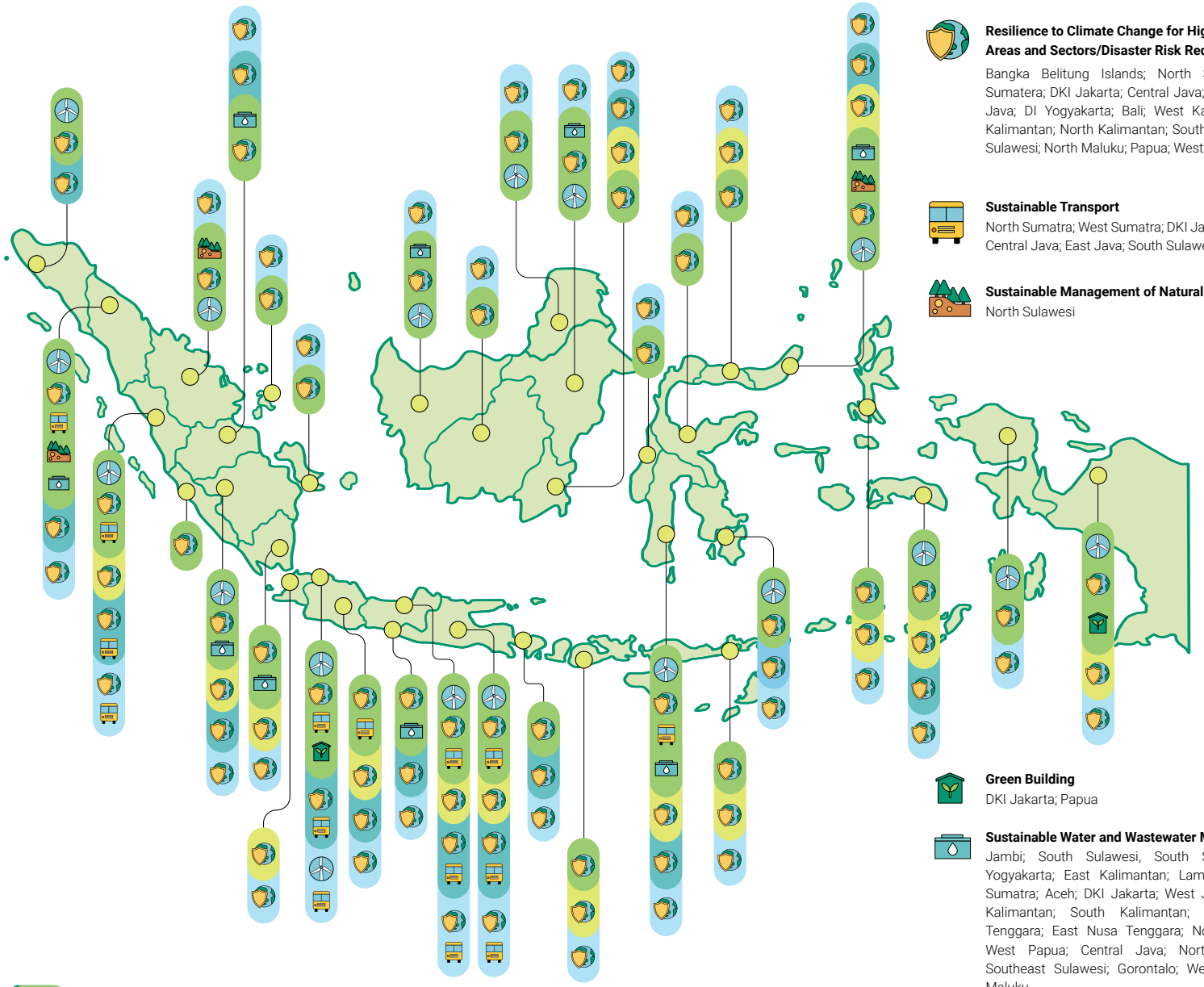
Improve municipal solid waste management, projected to benefit a total of 3.7 million people.

Sustainable Water and Wastewater Management

- Enhance the service capacity of water supply for **±284,628 hectares** of agricultural areas that are prone to flood and drought through the development/rehabilitation of 33 units of irrigation area along with 1,158 km water surface/swamp/coastal pond irrigation networks;
- Enhance the reservoir storage capacity of natural and artificial water storages at **±4,482 million m³** through the development and rehabilitation of 447 smaller and larger dams, 18 lakes and 119 rain-fed water storage (embung);
- Enhance drinking water treatment capacity service discharged at about 150 - 1,100 litres per second, and the wastewater treatment capacity through the construction/rehabilitation of the water treatment plants and house connection.



Geographic Locations of 2021 Global Green Sukuk and 2020 Retail Green Sukuk Projects



2022 GLOBAL GREEN SUKUK

Renewable Energy
Aceh; North Sumatra; West Sumatra; South Sumatra; Riau; DKI Jakarta; Central Java; East Java; East Kalimantan; North Kalimantan; Southeast Sulawesi; North Sulawesi; Maluku; Papua; West Papua.

Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction
Bangka Belitung Islands; North Sumatera; West Sumatera; DKI Jakarta; Central Java; East Java; West Java; DI Yogyakarta; Bali; West Kalimantan; South Kalimantan; North Kalimantan; South Sulawesi; North Sulawesi; North Maluku; Papua; West Papua

Sustainable Transport
North Sumatra; West Sumatra; DKI Jakarta; West Java; Central Java; East Java; South Sulawesi

Sustainable Management of Natural Resources
North Sulawesi

Green Building
DKI Jakarta; Papua

Sustainable Water and Wastewater Management
Jambi; South Sulawesi, South Sumatra; DI Yogyakarta; East Kalimantan; Lampung; North Sumatra; Aceh; DKI Jakarta; West Java; Central Kalimantan; South Kalimantan; West Nusa Tenggara; East Nusa Tenggara; North Maluku; West Papua; Central Java; North Sulawesi; Southeast Sulawesi; Gorontalo; West Sulawesi; Maluku

2022 PROJECT BASED GREEN SUKUK

Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction
West Sumatra; West Java; Central Java; North Sulawesi; South Sulawesi; North Maluku; Papuan; Banten; South Sumatra; Lampung; East Java; South Kalimantan; West Nusa Tenggara; East Nusa Tenggara; Gorontalo

2022 RETAIL GREEN SUKUK

Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction
Aceh; North Sumatra; West Sumatra; Jambi; DI Yogyakarta; South Sulawesi; South Sumatra; DKI Jakarta; West Java; Central Java; East Java; Bali; South Kalimantan; North Sulawesi; Southeast Sulawesi; Maluku

Sustainable Transport
West Sumatra; DKI Jakarta; Central Java; East Java

2021 RETAIL GREEN SUKUK

Renewable Energy
DKI Jakarta

Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction
Bali; North Sumatra; West Sumatra; Riau; Riau Islands; Jambi; Riau islands; South Sumatra; Lampung; Banten; West Java; DI Yogyakarta; East Java; Central Kalimantan; South Kalimantan; East Kalimantan; North Kalimantan; West Sulawesi; North Sulawesi; Central Sulawesi; South Sulawesi; Southeast Sulawesi; Gorontalo; Maluku; North Maluku; West Nusa Tenggara; East Nusa Tenggara; Papua; Central Java; West Papua; Bangka Belitung Islands

Sustainable Transport
DKI Jakarta; Central Java; East Java; West Sumatra

I. Introduction

Since its Green Sukuk debut in 2018, the Republic of Indonesia has not only succeeded to enter the market as the world's first sovereign Green Sukuk issuer, but have also finally issued the fifth Global Green Sukuk in 2022, accumulating the proceeds at USD 6.9 billion. The 2022 Global Green Sukuk issuance marked several notable achievements amidst the volatile global economy, including the largest Green Sukuk tranche ever printed globally and the first Green Sukuk tranche in 10-year maturity by the Republic of Indonesia. In addition, the Republic issued its inaugural Project-based Green Sukuk and Retail Green Sukuk (ST 009) for the domestic market in the same year. These thriving Green Sukuk issuances have consolidated Indonesia to steadily and consistently develop various non-state budget climate financing instruments.

The financing instruments are significantly needed to support the Government of Indonesia's commitment toward the 2015 Paris Agreement's Nationally Determined Contributions (NDCs) as well as the national development goals. To meet the NDCs, the Government of Indonesia has enhanced the ambition and issued supportive climate sectoral and financing policies in 2021 and 2022. On 23 September 2022, the Government submitted the Enhanced NDC document to the UNFCCC, which delineates increased ambition for climate change mitigation and adaptation actions. The Enhanced NDC affirms the Greenhouse Gas (GHG) emission reduction target to 31.89% unilaterally and 43.20% with international support by 2030, from formerly 29% and 41%, respectively. Additionally, the Government launched the 2030 FOLU Net-sink on forestry and land-use change action plan and initiated the G20 Transition Energy during its G20 Presidency of Indonesia in 2022.

To support the commitments, the Government issued Presidential Regulation Number 98/2021 and Ministerial Regulation No. 21/2022 delineating the implementation and alternative financing strategies of the NDCs by utilising carbon pricing mechanism and the GHG emission reduction in national development. The Regulations identify strategic carbon mechanisms comprising 'cap and trade', carbon offset, and result-based payment, which add to carbon tax regulated under Law No. 22/2021. These regulations strengthen the climate commitments that have been mainstreamed in the 2020-2024 National Midterm Development Plan (RPJMN) under the National Priority number 6 on environmental quality improvement, and specifically under Priority Programmes and Activities on low carbon development and climate resilience development, to which the Green Sukuk proceeds have been allocated and committed.

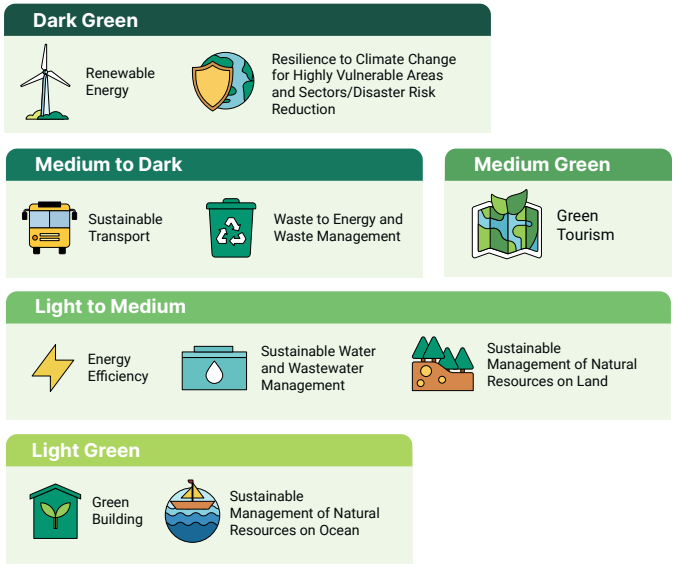
This annual report covers the 2022 global as well as the 2021-2022 domestic market green sukuk issuances which include the 2022 Project-based Green Sukuk, 2022 Retail Green Sukuk (ST-009), and 2021 Retail Green Sukuk (ST-008). The accumulated proceeds were committed to finance green projects in 2022 fiscal year and refinance those in 2021 and 2020 fiscal years. Sustainable transport and climate resilience sector categories remain the largest allocation, while inviting new sector categories i.e., sustainable management of natural resources on land and sustainable water and wastewater management category, as outlined in the Republic of Indonesia SDGs Government Securities Framework.

II. Summary of the Republic of Indonesia SDGs Government Securities Framework

Indonesia's Green Sukuk issuances were preceded by the development of the Republic of Indonesia Green Bond and Green Sukuk Framework in 2017, which outlines the 9 (nine) eligible sectors, the process of project selection, the management of proceeds, and the reporting of the Sukuk. In 2021, the Framework was reviewed and enhanced to become the Republic of Indonesia SDGs Government Securities Framework (the "SDGs Framework"). The SDGs Framework reflects the Government intention to issue Green and Blue Bonds and Sukuk ("Green Securities"), and Social and Sustainability Bonds and Sukuk ("SDGs Securities"), collectively referred as "Green and SDGs Securities" to fund projects that will deliver environmental and social benefits that support the Republic to achieve its 2030 sustainable development and climate change agenda. One of the major changes of the SDGs Framework is reflected on the eligible sector category and criteria that expand to projects with Green and Blue Focus that may have Social co-benefits, and those with Social Focus that may have Green co-benefits.

Similar to the Green Bond and Green Sukuk Framework, the SDGs Framework underwent an independent assessment against the international market standard by CICERO and IISD. The evaluation provided that the Framework is in alignment with the green bond principles, social bond principles, and sustainability bond guidelines. Noting the overall committed goals, procedures, and governance of Indonesia that are reflected through the Framework, CICERO awarded the Framework "Medium Green" shade and "Good" for the overall governance. With such an improvement, the 2022 and consecutive issuances will follow the SDGs Framework accordingly.

Green Shading according to CICERO's Second-Party Opinion[1]



[1] While the SDGs Framework include both Green and Social categories, the Green Sukuk Impact Report mainly focuses on the Green Categories (and their respective shading) given that this report is focused solely on Green Sukuk issuance.

a. Selection Procedure

The Framework stipulates the project selection procedure of Green Sukuk follows the Climate Budget Tagging (CBT) mechanism. The CBT system has been embedded into the government's national budget system (ADIK system in 2016 and KRISNA system in 2018) - and was established to track and identify ministry expenditures/projects that contribute towards climate change mitigation and adaptation, in accordance with Indonesia's climate targets.

The green projects eligible for financing or refinancing by the Green Sukuk are selected from tagged projects that fall under the eligible Green and Blue Focus of the SDGs Framework. The Ministry of Finance selects projects that are suitable by timeline with the tenure of the Green Sukuk. The impact of each project—both environmental and non-environmental (social) impacts—are assessed and measured by the individual ministries as project owners together with the Ministry of National Development Planning, and are verified by the Ministry of Environment and Forestry to be consistent 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 Contributions (NDCs). The assessment employs internationally accepted methodologies, where possible. Upon the verification by the Ministry of Environment and Forestry, the projected GHG emissions reduction and resilience indicators performance will be registered in the National Registry System on Climate Change Control (SRN).

b. Management of Proceeds

The SDGs Framework indicates that the proceeds of Green Sukuk should be managed within the government's general account. The proceeds are credited to a designated account of relevant ministries to exclusively fund the projects, as defined in the Framework. Pending proceeds allocation to eligible green projects are held in cash in the government's general account at Bank Indonesia (Central Bank of the Republic of Indonesia). The Ministry of Finance actively manages the processes for Green Sukuk proceeds allocation and is responsible to ensure that the proceeds are indeed directed to and used for investments in accordance with the Framework. Line ministries/agencies that utilise the Green Sukuk proceeds monitor and report the impacts of the eligible green projects within their respective portfolio to the Ministry of Finance.

Republic of Indonesia SDGs Government Securities Framework

The Government of Indonesia further cemented its sustainable development commitments by mainstreaming the SDGs into the Medium Term National Development Plan 2020-2024, and has adapted to the dynamics of the Green, Social, and Sustainability (GSS) bond market. Following successful issuances of Green Sukuk since 2018, a wider variety of Green and Social projects were identified to have stronger linkages to SDGs—and therefore are apt for the label of SDGs Bond. This has responded to the growing trends among investors who are increasingly embracing holistic approaches to sustainability and embedding the SDGs into their investment portfolios.

In 2021, the GOI developed the Republic of Indonesia SDGs Government Securities Framework (SDGs Framework) to demonstrate its intention to issue Green and Blue Bonds and Sukuk, and Social and Sustainability Bonds and Sukuk under a collective framework. The SDGs Framework was an expansion of the existing Republic of Indonesia 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 for financing and refinancing of projects under 14 eligible sectors, 10 from the Green and Blue Focus and 4 from the Social Focus. Future issuances of GSS Securities will follow the SDGs Framework.

III. Featured Projects

a. Railway Infrastructure Connectivity in South Sulawesi

One of the stations at Maros—Barru railway line. (Photo source: DG of Railways, Ministry of Transport)

Railway infrastructure in Sulawesi Island is considered less developed than those of Java and Sumatra regions. Recently, the Government of Indonesia introduced the National Strategic Project's Trans Sulawesi Railway development that will connect all provincial capital cities of Sulawesi Island from Makassar in the South to Manado in the North stretching about 2,000 kilometres in distance. The Makassar – Parepare Line construction project is the first phase of the grand plan, commenced in 2015. The Line connects several ports and cement industrial areas, thereby creating a new node for the multimodal transportation network. South Sulawesi Province is considered a province with the largest estimated pattern of passenger and goods travel compared to other provinces on Sulawesi Island.

The project consists of five segments, which covers a distance of 142 kilometres. By December 2022, 118 kilometres and 14 stations were constructed along Maros, Pangkajene and Kepulauan (Pangkep), and Barru Regencies. The 2022 Green Sukuk proceeds were disbursed to finance and refinance the projects of railway connectivity infrastructure development in FY 2022 and FY 2021, respectively. It financed Mandai – Tanete Rilau Segment 3 (D) that spans 67.1 kilometres in distance. The project components include land acquisition, infrastructure and facility constructions such as railways, bridges, and buildings.

The single-track railway is projected to enable the shift of passengers and goods mobility from private, public, and freight vehicles. It is expected to cut travel time from 3 hours to 1.5 hours, which consequently reduce energy consumption, and GHG emission. However, the projected emission reduction is still under calculation by the Ministry of Transport at the time of reporting.

The passenger transport potential of South Sulawesi Province, with a population growth rate of above 8.7% per year, is projected to reach 8.3 million passengers per year by 2050. Meanwhile, the transport potential of goods, namely cement, clinker, and food stock, is projected to reach 60-70 million tons per year by 2050. South Sulawesi is known as a rice-producing province, which produces nearly 412,000 tons/year, and cement producer from two major factories of Bosowa and Tonasa at 4,200,000 tons and 5,702,498 tons per year in 2020, respectively. Accordingly, sliding tracks were built that provide access from new and existing production centres to Garongkong Seaport by way of the main line. In addition to being a pioneering passenger transport, the railway will also serve as a tourist train to a number of potential tourist attractions in South Sulawesi, such as in Barru regency and Rammang-Rammang tourist village.

The project is one of the manifestations of the Nawacita's nine national development priorities to leverage economic growth in Sulawesi Island. The Makassar - Parepare Line is projected to provide an internal rate of return at IDR 2.51 trillion (USD 174,912,892) or 22.98 percent of the total South Sulawesi's Gross Domestic Product (GDP). The project provides about 6,146 direct construction jobs, whilst the stations will become new economic hubs for small and medium enterprises.

b. Plant Nursery Centre and Forest and Land Rehabilitation

Likupang Permanent Plant Nursery at Batu Putih Nature Tourism Area, Bitung City. (Photo source: DG of Watershed Management and Forest Rehabilitation, Ministry of Environment and Forestry)

Forest and land rehabilitation is implemented through reforestation, afforestation, and application of soil conservation techniques. The rehabilitation offers climate change co-benefits of both mitigation and adaptation actions from increasing carbon sequestration to avoiding risks to flood, drought, and landslide. The forest and land rehabilitation are necessarily supplied by the development of plant nursery centres. The Ministry of Environment and Forestry plans to establish 26 modern permanent plant nursery centres across Indonesia in the period of 2022 to 2024, particularly in the Government's designated special economic zones. This action aims at contributing Indonesia's plan to achieve the target of carbon net sink from forest and other land uses sector by 2030 or 2030 FOLU Net Sink, as part of Indonesia's National Designated Contributions target.

The 2022 Green Sukuk proceeds were allocated to finance the FY 2022 project on forest and land rehabilitation, plant nursery establishment, as well as soil and land conservation. The Likupang Permanent Plant Nursery is located at Batu Putih Nature Tourism Park in Bitung City of North Sulawesi Province, under the management of Tondano Watershed and Forest Rehabilitation Office (BPDASRH). The activities include the development of buildings, wastewater treatment plant, road access to the nursery and the supporting facilities, as well as tree species' seedling propagation. BPDASRH innovates the rehabilitation by creating cubicle and cylindric compost blocks, in which the seeds are planted to secure the nutrients during the early growth.

The plants include forest plant species and multi-purpose tree species or plants that offer ecological and economic values such as *meranti*, ironwood, mahogany, *bengkirai*, pine, macadamia nuts, palm, tabebuia, coffee and other species. Such an agroforestry approach is applied to improve the land function for both preservation of the surrounding environment and utilisation for the communities. In FY 2022, the Likupang Plant Nursery succeeded in propagating 2.5 million seedlings. In addition to supplying the government demands, the seedlings are made available for the community for free to support the forest and land rehabilitation.

The Likupang Permanent Plant Nursery is designated to support the environmental quality improvement of the Likupang Special Economic Zone, which is administratively located in North Minahasa Regency of the North Sulawesi Province. The Likupang is assigned by the Central Government as one of the super priority tourism destination areas to be developed for eco-tourism and cultural tourism.

c. Construction of Ciawi and Sukamahi Dry Dams

Aerial view of Ciawi and Sukamahi Dams (Photo source: DG of Water Resource, Ministry of Public Works and Housing)

With the increasing intensity and frequency of rainfall in recent years, Jakarta has seen an increase in flooding frequency and severity. Geographically, Jakarta and the satellite cities, also known as Greater Jakarta (Jabodetabek), are surrounded by volcanoes at which the slopes form the upstream catchment area of rivers flowing through the city. To reduce the risks of flooding, the central government has developed a master plan which covers measures from upstream to downstream areas and indicates this as a National Strategic Project.

At the upstream area, the Ministry of Public Work and Housing has recently built two dry-type dams with special functions for flood control of the Greater Jakarta area. Dry-type dam is a dam that dries during the dry season and flooded during the wet season. The Ciawi and Sukamahi Dams are located in the upper basin of the Ciliwung River of Bogor Regency. The construction of dams, which were a multi-year project, includes the main dam work, spillway construction and hydromechanical work – and the 2022 Green Sukuk proceeds particularly contributed to refinance the main dam work. Both dams were inaugurated by President Joko Widodo on 23 December 2022.

The dams are designed to reduce the risk of flood that flows to Jakarta by retaining the flow of water from Mount Gede and Mount Pangrango, prior to reaching the Katulampa Dam, and arranging the flow downward to Depok and Manggarai Water Gates, as the final water gate of Jakarta area. The Ciawi Dam has a designed storage capacity at 6.45 million m^3 and water surface area at 39.40 hectares that is projected to retain the water debit of Ciliwung River at about 30.6 percent (from 365 m^3 to 253.25 m^3), and therefore reduce the vulnerability of downstream areas. On the other hand, the Sukamahi Dam has 1.68 million m^3 of storage capacity and 5.23 hectares of water surface area and serves to retain water debit at about 27.37 percent (from 56.52 m^3 to 41.05 m^3).

In addition to flood control, the Ciawi and Sukamahi Dams are designed to be an ecotourism park, which is integrated with the conservation forest zone as a greenbelt area. The area is being rehabilitated with native and multi-purpose plant species, allowing the visitors to experience fruit picking tours.

IV. List of Projects

Table 1.1 – Financing Projects of the 2022 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2022[2])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Sea transportation safety and security	Installation and revitalisation of solar PV-powered aids to navigation at sea devices to enhance the sea safety transportation and traffic services. The devices include solar PV for lighthouses, beacons, and flare buoys.	Aceh, North Sumatra, West Sumatra, South Sumatra, Riau, Central Java, East Java, East Kalimantan, North Kalimantan, Southeast Sulawesi, North Sulawesi, Maluku, Papua, West Papua	32,105,164,480	2,237,293.69	3-5 years	Contribute to the GHG emission reduction at 1,883.39 tonnes CO2* in total	Streamlining shipping navigation and improving shipping safety	7, 9, 13	Ministry of Transportation
2	Renewable Energy	Generation and transmission of energy from renewable energy sources	Greater Jakarta transportation infrastructure connectivity	Procurement and installation of rooftop solar PV at Pondok Cabe Type A Bus Station in South Tangerang City.	Special Capital Region of Jakarta	4,832,552,000	336,763.21	3-5 years	tbc	Renewable energy, energy efficieny	7, 9, 13	Ministry of Transportation
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Flood and lava control, major urban drainage management, and beach protection	Development and rehabilitation of structures for urban and tidal flood control and beach protection such as breakwaters and drainage network.	Bangka Belitung Islands, Special Capital Region of Jakarta, West Kalimantan, North Kalimantan, North Maluku	905,559,570,727	63,105,196.57	10-20 years	Adaptation/ resilience	Reduced ±2,645 hectares potential area that are prone to water hazard of floodings, supported by the development/rehabilitation of 41 km riverine flood control and 34 km coastal protection structures built	3, 9, 13, 14	Ministry of Public Work and Housing
4	Sustainable Transport	Developing clean transportation systems	Railway transportation infrastructure connectivity	Development of a new railway line in South Sulawesi Province to open public access to railroad services under the framework of regional economic development and transportation connectivity. The project includes road and bridge construction.	South Sulawesi	563,661,284,186	39,279,532.00	10 years	tbc	Economic development, transportation connectivity improvement, reduced road congestion, and employment opportunities	8, 9, 11, 13	Ministry of Transportation

[2] Financing Projects of the 2022 Global Green Sukuk Issuance are projects implemented in 2022. Per 31 December 2022, the total amount allocated to financing is 25% of the 2022 Global Green Sukuk proceeds (USD 1.5 billion). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

5	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Greater Jakarta transportation infrastructure connectivity	Reactivation of Cross Citayam - Nambo Station and Integration Facilities in support of the Greater Jakarta urban railway. It includes construction of station main building, platform, and signal and telecommunication.	Special Capital Region of Jakarta (Greater Jakarta Commuter Line/ KRL)	14,352,594,000	1,000,180.77	10 years	Contribute to the GHG emission reduction of Greater Jakarta urban railway in 2022: 242,689.23 tonnes CO2e *	Economic development, transportation connectivity improvement, and reduced road congestion	8, 9, 11, 13	Ministry of Transportation
6	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Railway Transportation Services; Railway Transportation Safety and Security; Railway Transport Infrastructure Connectivity	Development of infrastructure to increase railway capacity, including the construction of double tracks under the framework of transportation connectivity across Java Island. The project includes railway and bridge construction and operation and management.	Special Capital Region of Jakarta, West Java, Central Java, East Java (KA Lintas Jawa)	2,504,452,649,556	174,526,317.04	10 years	Contribute to the GHG emission reduction of North Java Line in 2022 at 710,595.56 tonnes CO2e *	Economic development, transportation connectivity improvement, and reduced road congestion	8, 9, 11, 13	Ministry of Transportation
7	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Railway Transportation Services; Railway Transport Infrastructure Connectivity	Development of infrastructures to increase railway capacity under the framework of transportation connectivity across Sumatra Island. The project includes railway and bridge construction and operation and management.	West Sumatra, North Sumatra (KA Lintas Sumatra)	845,432,416,172	58,915,150.95	10 years	Contribute to the GHG emission reduction of Sumatra railway in 2022 at 29,455.40 tonnes CO2e *	Economic development, transportation connectivity improvement, and reduced road congestion	8, 9, 11, 13	Ministry of Transportation
8	Sustainable Management of Natural Resources on Land	Sustainable management of natural resources which substantially avoids or reduces carbon loss/ increases carbon sequestration	Forest Rehabilitation	Development of facilities and infrastructures to support forest rehabilitation, including buildings and road access to nursery, forest and multipurpose species' seedling nursery, and wastewater treatment plant in the area.	North Sulawesi	6,304,715,421	439,352.99	5-10 years	To be confirmed	Number of seedlings propagated at Likupang Permanent Plant Nursery reached 2.5 million. Community participation is encouraged in the project	13, 15	Ministry of Environment & Forestry
9	Waste to Energy and Waste Management	Improving waste management	Implementation of decent sanitation services	Development and improvement of regional-scale waste management system in North Sulawesi and Special Region of Yogyakarta Province toward a sanitary landfill system. Mamitarang Regional Landfill serves Manado and Bitung Cities, and Minahasa and Minahasa Utara Regencies, which are few of the super priority tourism destinations. Piyungan Regional Landfill serves Yogyakarta City, Bantul, and Sleman Regencies.	Special Region of Yogyakarta, North Sulawesi	32,702,226,378	2,278,900.79	10-20 years	Adaptation/ resilience	Mamitarang Landfill area size is 7.2 hectare with waste treatment capacity at 500 tonnes/day. Piyungan area size is 12.5 hectare with treatment capacity at 500 tonnes/day	11, 12, 13, 14	Ministry of Public Work and Housing

10	Sustainable Water and Wastewater Management	Construction and improvement of public water distribution and treatment facilities	Implementation of decent sanitation services	Development of centralised domestic wastewater management system at city scale covering house network, pipeline, control tub, and wastewater treatment plant. The sanitation system development program is one of the medium-term development priorities, with aim to meet the target of 100% access to decent and safe drinking water by 2024.	Jambi, South Sulawesi, South Sumatra	194,700,494,969	13,567,978.74	10-20 years	Adaptation/ resilience	Number of house connections in Jambi (1,254 units), South Sulawesi (2,000 units), and WWTP in South Sumatra (1 unit)	6, 13	Ministry of Public Work and Housing
11	Sustainable Water and Wastewater Management	Construction and improvement of public water distribution and treatment facilities	Implementation of decent drinking water	Development and improvement of public drinking water supply system (SPAM) infrastructure of cities/regencies and of regional system that cover two or more cities to achieve an affordable, healthy and steady supply of drinking water.	Special Region of Yogyakarta, East Kalimantan, Lampung, North Sumatra	277,407,497,369	19,331,532.92	10-20 years	Adaptation/ resilience	Increased water treatment capacity in Kartamantul Regional SPAM (Special Region of Yogyakarta) at 700 litre/ second; Mebidang Regional SPAM (North Sumatra) at 1,100 litre/second	6, 13	Ministry of Public Work and Housing

Table 1.2 – Refinancing Projects of the 2022 Global Green Sukuk Allocation

(This table includes projected impacts reported for the refinancing projects - 2021[3])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Flood and lava control, major urban drainage management, and coastal protection	Development and rehabilitation of structures for urban and tidal flood control and beach protection, such as breakwaters and drainage network.	North Sumatra, West Sumatra, Special Capital Region of Jakarta, West Java, Central Java, Special Region of Yogyakarta, East Java, Bali, West Kalimantan, South Kalimantan, South Sulawesi, Papua, West Papua	3,741,586,869,531	260,737,761	10-20 years	Adaptation/ resilience	Reduced area size of water hazard potential risks of floodings that is resulted from the development/ rehabilitation of 166 km riverine flood control and 86 km coastal protection structures built in 13 provinces	3, 9, 13, 14	Ministry of Public Work and Housing
2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Operation and maintenance of facilities and infrastructure for water resources and emergency responses to disasters	The activity focuses on equipment procurement for supporting the operation and maintenance of facilities and infrastructures.	Special Capital Region of Jakarta	178,396,925,955	12,431,842	10-20 years	Adaptation/ resilience	Improved operation and maintenance of structures and infrastructure	3, 9, 13, 14	Ministry of Public Work and Housing

[3] Refinancing Projects of the 2022 Global Green Sukuk Issuance are projects implemented in 2021. Per 31 December 2022, the total amount allocated to financing is 75% of the 2022 Global Green Sukuk proceeds (USD 1.5 billion). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Development of groundwater and raw water networks	Development of groundwater and raw water facilities including wells, intake and transmission network to improve agricultural and drinking water supply.	North Sumatra, Central Java, North Sulawesi, West Papua	475,625,854,820	33,144,659	10-20 years	Adaptation/ resilience	Improved service capacity discharge at 4.10 m3/s of the national standardised target of raw water structures and infrastructure built that originates from the construction/ rehabilitation of 585 raw water units and 50 km groundwater irrigation networks, benefiting ±304 hectare of areas risks to flood and drought in 4 provinces	3, 9, 13, 14	Ministry of Public Work and Housing
4	Sustainable Transport	Developing clean transportation systems	Railway transportation infrastructure connectivity	Development of a new railway line on Sulawesi Island, to open public access to railroad services, in the framework of regional economic development and transportation connectivity. The project includes railway and bridge construction.	South Sulawesi	18,074,040,913	1,259,515	10 years	tbc	Economic development and transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation
5	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Railway Transportation Services; Railway Transportation Safety and Security; Railway Transport Infrastructure Connectivity	Development of infrastructure to increase railway capacity, including the construction of double tracks in the framework of transportation connectivity across Java Island. The project includes railway and bridge construction and operation & management.	Special Capital Region of Jakarta, Central Java	38,244,100,593	2,665,094	10 years	Contribute to the GHG emission reduction of a) Greater Jakarta urban railway at 97,071.47 tonnes CO2e; b) Double track of North Java Line & Sumatra railway (passenger and freight trains) at 1,790,881.55 tonnes CO2e.	Economic development and transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation
6	Green Building	Developing green buildings in line with Greenship	Residential and Building Maintenance	Construction and retrofitting of buildings that takes into account green building standard and performance indicator set by the government. It included development of sport and entreperneuship infrastructures at Musamus State University of Merauke Regency, Operation & Maintenance of the Ministry of Public Work and Housing building, and a safe house for children and women victims of violence in Special Capital Region of Jakarta Province.	Special Capital Region of Jakarta, Papua	33,026,145,975	2,301,474	10 years	tbc	Established buildings that is energy efficient and environmentally-friendly and become a building model implementing green building principles	9, 11, 13	Ministry of Public Work and Housing
7	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Development of water surface, swamp and non-ricefield irrigation networks	Development and technical assistance of infrastructures of water resources for non-ricefield irrigation network including irrigation civic structures and networks.	Aceh, North Sumatra, Jambi, Special Capital Region of Jakarta, West Java, Special Region of Yogyakarta, Central Kalimantan, South Kalimantan, West Nusa Tenggara, East Nusa Tenggara, South Sulawesi, North Maluku, West Papua	2,744,657,865,356	191,265,356	10-20 years	Adaptation/ resilience	Enhanced service capacity of water supply for ±19,653 hectares of agricultural areas that are prone to flood and drought supported by the development/ rehabilitation of 8 units of irrigation dams, 346 km water surface/swamp/ coastal pond irrigation networks and areas, and 30 km swamp area conserved	6, 11, 13	Ministry of Public Work and Housing

8	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Management of dams, lakes and other water storage facilities	Development and rehabilitation/revitalisation of structures of dams, lakes and water storages including the networks construction and rehabilitation.	Aceh, North Sumatra, South Sumatra, Special Capital Region of Jakarta, West Java, Central Java, Special Region of Yogyakarta, East Kalimantan, North Sulawesi, South Sulawesi, Southeast Sulawesi, East Nusa Tenggara, Gorontalo, West Sulawesi, Maluku	8,272,884,744,147	576,507,648	10-20 years	Adaptation/ resilience	Enhanced reservoir storage capacity of dams and other water storages at 1,796 million m3 supported by the development and rehabilitation of 95 dams developed/ rehabilitated, 81 rain-fed water storage (embung) developed, 2 lakes and 2 small lakes (situ) revitalised	6, 11, 13	Ministry of Public Work and Housing
9	Sustainable Water and Wastewater Management	Construction and improvement of public water distribution and treatment facilities	Implementation of decent drinking water	Development, improvement and expansion of public drinking water supply system (SPAM) infrastructure of cities/regencies including water treatment plants and the pipelines construction.	Lampung, East Nusa Tenggara, East Kalimantan	641,280,169,126	44,688,514	10-20 years	Adaptation/ resilience	Increased respective water treatment capacity discharge at 2x50 litre/second in Manggarai Barat Regency, 150 litre/s in Kupang City, 250 litre/s in Samarinda City, 2x30 litre/s in Pringsewu, and 750 litre/s in Bandar Lampung City	6, 11, 13	Ministry of Public Work and Housing

Note:

a. The type of projects refers to 15 eligible sectors under the Republic of Indonesia SDGs Government Securities Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. Denotes limited assurance from KAP PSS - EY on the amount committed to green projects. The Republic of Indonesia SDGs Government Securities Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/governmentsecuritiesframework. The currency exchange rate is based on the State Budget Assumption for 2022 budget year of IDR 14,350 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.3 – Refinancing Projects of the 2022 Project-Based Green Sukuk Allocation

(This table includes projected impacts reported for the refinancing projects - 2021[4])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Flood and lava control, major urban drainage management, and coastal protection	Development and rehabilitation of structures for urban and tidal flood control and coastal protection such as flood embankment, riverbank reinforcement, check dam, sabo dam, polder, breakwaters, and drainage network.	West Sumatra, Riau, West Java, Central Java, North Sulawesi, South Sulawesi, North Maluku, Papua	521,563,626,449	36,345,897	10-20 years	N/A	Reduced ±2,645 hectares potential area that are prone to water hazard of floodings supported by the development/ rehabilitation of 26 km riverine flood control and 12 km coastal protection structures.	3, 9, 13, 14	Ministry of Public Works and Housing
2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Development of groundwater and raw water networks	Development of raw water and groundwater structures and infrastructures including wells, intake, storage, and piping transmission networks to improve clean water capacity supplies.	Special Capital Region of Jakarta, West Nusa Tenggara, South Sulawesi	200,464,901,528	13,969,680	10-20 years	N/A	Enhanced service capacity discharge at 4.10 m3/s of the national standardised target of raw water structures and infrastructure built that originates from the construction/ rehabilitation of 67 km raw water units and 18 units of wells and intakes, benefiting ±304 hectare of areas risks to flood and drought in 3 provinces.	3, 9, 13, 14	Ministry of Public Works and Housing
3	Sustainable Transport	Development of groundwater and raw water networks	Railway transportation infrastructure connectivity	Development of a new railway line in Sulawesi Island, to open public access to railroad services. The project includes railway construction.	South Sulawesi	2,283,483,000	159,128	10 years	tbc	Economic development and transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation
4	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Railway Transportation Services	Development of infrastructure to enhance the railway capacity, including the construction of double tracks under the framework of transportation connectivity across Java Island.	Central Java	859,234,070	59,877	10 years	Contribute to the GHG emission reduction of North Java Line and Sumatra railway (passenger and freight trains) : 1,790,881.55 tonnes CO2e.	Economic development and transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation

[4] Refinancing Projects of the 2022 Project-Based Green Sukuk Issuance are projects implemented in 2021. Per 31 December 2022, the total amount

5	Green Building	Developing green buildings in line with Greenship	Residential and Building Maintenance	Construction and retrofitting of buildings that takes into account green building standard and performance indicator set by the government. It included development of sport and entreperneuship infrastructures at Musamus State University of Merauke Regency	Papua	64,464,742,471	4,492,317	10 years	tbc	Established university building that is energy efficient and environmentally-friendly, and become a building model for implementing green building principles	9, 11, 13	Ministry of Public Work and Housing
6	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Development of water surface, swamp and non-ricefield irrigation networks	Development and rehabilitation of water resources structures and infrastructures for ricefield and non-ricefield irrigation network including land acquisition, and construction and rehabilitation of weirs, irrigation area, and network civic structures.	Central Java, South Kalimantan, Central Sulawesi, West Sulawesi	295,236,426,302	20,573,967	10-20 years	N/A	Enhanced service capacity of water supply for ±25,356 hectares of agricultural areas that are prone to flood and drought supported by the development/ rehabilitation of 4 units of weirs, 161 km irrigation networks and areas.	6, 11, 13	Ministry of Public Work and Housing
7	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Management of dams, lakes and other water storage structures	Development and revitalisation of structures of artificial and natural water storages including dams, reservoirs, ponds (embung), lakes, and small lakes (situ).	Banten, West Java, Central Java	199,259,655,053	13,885,690	10-20 years	N/A	Enhanced carrying capacity of water resources at ±26 million m3 resulted from the development/ rehabilitation of 9 units of dams and water storage (embung). In addition, microhydro power plants were installed at appropriate few larger dams as a co-benefit.	3, 9, 13, 14	Ministry of Public Works and Housing

Table 1.4 – Refinancing Projects of the 2022 Project-Based Green Sukuk Allocation

(This table includes projected impacts reported for the refinancing projects - 2020[5])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime* d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Improvement of the Energy Efficiency of Infrastructure	Development and Management of Sea Transportation and Traffic sub-sector	Provision and revitalisation of solar PV powered aids to navigation at sea to enhance the sea safety transportation and traffic services. The devices include solar PV for lighthouses, beacons, and flare buoys.	South Sulawesi	491,163,200	34,227	3-5 years	Contribute to the GHG emission reduction at 4,972 ton CO2e per year in 2020 in total	Streamlining shipping navigation and improving shipping safety	7, 9, 13	Ministry of Transportation

[5] Refinancing Projects of the 2022 Project-Based Green Sukuk Issuance are projects implemented in 2021. Per 31 December 2022, the total amount

2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction	Drought management	Development of groundwater and raw water networks	Development and rehabilitation of raw water and groundwater structures and infrastructures including wells, intake, water storages (embung), and piping transmission networks to improve clean water capacity supplies.	North Maluku	23,953,018,000	1,669,200	10-20 years	N/A	Enhanced service capacity discharge at 4.10 m3/s of the national standardised target of raw water structures and infrastructure built that originates from the construction/ rehabilitation of 24 km raw water units and 4 units of wells and 4 water storage (embung)	3, 9, 13, 14	Ministry of Public Work and Housing
3	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Railway Transportation Services; Railway Transportation Safety and Security; Railway Transport Infrastructure Connectivity	Development of infrastructure to increase railway capacity, including the construction of double tracks in the framework of transportation connectivity across Java Island. The project includes railway and bridge construction and operation and management.	East Java	326,477,356,932	22,751,035	10 years	Contribute to the GHG emission reduction of a) Greater Jakarta Commuter Line (KRL): 172,001 tonnes CO2e; b) Double track of North Java Line and Sumatra railway (passenger and freight trains): 1,121,689 tonnes CO2e	Economic development and transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation
4	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Development of water surface, swamp and coastal pond irrigation networks	Development and technical assistance of infrastructures of water resources for non-ricefield irrigation network including irrigation civic structures and networks.	South Sumatra, East Java, East Nusa Tenggara	107,904,203,265	7,519,457	10-20 years	N/A	Enhanced service capacity of water supply for ±8,403 hectares of agricultural areas that are prone to flood and drought supported by the development/ rehabilitation of 2 units of weirs and 81 km irrigation networks and areas	6, 11, 13	Ministry of Public Work and Housing
5	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Management of dams, lakes and other water storage structures	Development and revitalisation of structures of artificial and natural water storages including dams, ponds (embung), lakes, and small lakes (situ).	South Sumatra, Lampung, West Java, Central Java, East Java, South Kalimantan, West Nusa Tenggara, East Nusa Tenggara, Gorontalo	5,000,543,758,878	348,469,948	10-20 years	N/A	Enhanced the carrying capacity of water resources at ±975 million m3 supported by the development/ rehabilitation of 12 dams, 11 ponds, 2 lakes, and 10 small lakes. In addition, microhydro power plants were installed at appropriate few larger dams as a co-benefit	3, 9, 13, 14	Ministry of Public Works and Housing

Note:

a. The type of projects refers to 15 eligible sectors under the Republic of Indonesia SDGs Government Securities Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The Republic of Indonesia SDGs Government Securities Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/governmentsecuritiesframework. The currency exchange rate is based on the State Budget Assumption for 2022 budget year of IDR 14,350 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.5 – Refinancing Projects of the 2022 Retail Green Sukuk (ST-009) Allocation

(This table includes projected impacts reported for financing projects - 2020)

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Development of groundwater and raw water networks	The project components include development of intake and transmission pipeline networks for raw water originated from surface and ground water or other existing sources.	North Sumatra; South Sumatra	103,281,005,966	7,197,283	10-20 years	N/A	Improved service capacity discharge at 4.10 m3/s of the national standardised target of raw water structures and infrastructure built that originates from the construction/ rehabilitation of 9.1 km raw water units and 56 units of wells of groundwater irrigation networks, benefiting areas risks to flood and drought in 3 provinces	3, 9, 13, 14	Ministry of Public Work and Housing
2	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Development and management of railway infrastructure and supporting facilities	Development of infrastructure to increase railway capacity, including the construction of double tracks under the framework of transportation connectivity across Java Island. The project includes railway and bridge construction and operation & management.	West Sumatra, Special Capital Region of Jakarta, Central Java, East Java	5,374,487,427,244	374,528,741	10 years	Contribute to the GHG emission reduction of a) Greater Jakarta Commuter Line (KRL): 172,001 tonnes CO2e; b) Double track of North Java Line & Sumatra railway (passenger and freight trains): 1,121,689 tonnes CO2e	Economic development, transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation
3	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Development and rehabilitation of surface, swamp, and pond irrigation networks	Development and rehabilitation of infrastructure of surface irrigation networks and the dams under the authority of central government.	Aceh, North Sumatra, West Sumatra, Jambi, Special Region of Yogyakarta, South Sulawesi	930,669,546,917	64,855,021	10-20 years	N/A	Enhanced service capacity of water supply for ±18,052 hectares of agricultural areas that are prone to flood and drought supported by the development/ rehabilitation of 3 units of irrigation weirs and 163 km irrigation networks and areas	6, 11, 13	Ministry of Public Work and Housing

4	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Management of dams, lakes and other water storage structures	Development and rehabilitation/revitalisation of structures of dams, lakes, and water storages including the networks.	Aceh, North Sumatra, South Sumatra, Special Capital Region of Jakarta, West Java, Central Java, Special Region of Yogyakarta, East Java, Bali, South Kalimantan, North Sulawesi, South Sulawesi, Southeast Sulawesi, Maluku	3,591,579,108,436	250,284,258	10-20 years	N/A	Enhanced reservoir storage capacity of dams and other water storages at ±1,126 million m3 supported by the development and rehabilitation of 260 on-going development dams and 5 conservation rain-fed water storage (embung)	6, 11, 13	Ministry of Public Work and Housing

Note:
a. The type of projects refers to 15 eligible sectors under the Republic of Indonesia SDGs Government Securities Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The Republic of Indonesia SDGs Government Securities Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/governmentsecuritiesframework. The currency exchange rate is based on the State Budget Assumption for 2022 budget year of IDR 14,350 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.6 – Financing Projects of the 2021 Retail Green Sukuk (ST-008) Allocation

(This table includes projected impacts reported for financing projects - 2021)

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Flood and lava control, major urban drainage management, and coastal protection	Development of coastal protection structures to reduce risks of high waves and sea level rise such as sea wall, sea dikes, and water breaks. The development are focused on areas for tourist destination, community activities, and outer islands.	Lampung, West Java, Bali, West Nusa Tenggara, Southeast Sulawesi	381,378,958,100	26,121,846	10-20 years	N/A	Reduced ±2,645 hectares potential area that are risks from water hazard of floodings supported by the development/ rehabilitation of 19 km coastal protection structures.	3, 9, 13, 14	Ministry of Public Work and Housing
2	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Railway transportation infrastructure connectivity, andd Railway transportation services	Infrastructure development to increase railway capacity in Java and Sumatra Island, including the construction of double tracks under the framework of transportation connectivity across Java Island.	West Sumatra, Special Capital Region of Jakarta, Central Java, East Java	2,341,211,922,031	160,356,981	10 years	Contribute to the GHG emission reduction of a) Greater Jakarta Commuter Line (KRL): 97,071.47 tonnes CO2e; b) Double track of North Java Line & Sumatra railway (passenger and freight trains) : 1,790,881.55 tonnes CO2e.	Economic development and transportation connectivity improvement	8, 9, 11, 13	Ministry of Transportation

Table 1.7 – Refinancing Projects of the 2021 Retail Green Sukuk (ST-008) Allocation

(This table includes projected impacts reported for financing projects - 2020)

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Committed (in USD)*c	Average Project Lifetime* d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Planning, development and supervision of new & renewable energy infrastructure and energy conservation	Installation of solar power plants at 22 border outposts, which are generally located in remote area with no electrical network. By using the solar energy, the border outposts are self-reliant for their electricity supply without relying to fossil fuel-generated electricity.	Papua, West Papua, West Kalimantan, North Kalimantan, East Kalimantan	30,569,559,240	2,093,805	3-5 years	Contribute to the GHG emission reduction at 123,461 tonnes CO2e in total	Solar power plants with 165 kWp installed capacity that generate 123.4 MWh power per year	7, 13, 14	Ministry of Energy & Mineral Resources
2	Renewable Energy	Generation and transmission of energy from renewable energy sources	Sea transportation safety and security	Installation and revitalisation of solar PV-powered aids to navigation at sea to enhance the sea safety transportation and traffic services. The devices include solar PV for lighthouses, beacons, and flare buoys.	Special Capital Region of Jakarta, Central Java, East Java, West Sumatra, South Sumatra, West Kalimantan, South Kalimantan, South Sulawesi, Southeast Sulawesi, Maluku, East Nusa Tenggara, Papua, Riau Islands, North Kalimantan	67,369,082,788	4,614,321	3-5 years	Contribute to the GHG emission reduction at 4,972 ton CO2e in total	Streamlining shipping navigation and improving shipping safety	7, 9, 13	Ministry of Transportation
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Development of groundwater and raw water networks	Development of groundwater irrigation networks and their infrastructures consisting of wells, submersible pump installations, embung (rain-fed storage), and groundwater irrigation canals, including the control buildings. This technology is designed to increase agricultural productivity in wetlands that are not inundated, yet the depth of groundwater at high tide is less than or more than 50 centimeters (type C or D wetland area, respectively).	North Sumatra, West Sumatra, Riau, Jambi, Bangka Belitung Islands, South Sumatra, Lampung, Banten, West Java, Central Java, Special Region of Yogyakarta, East Java, Bali, West Nusa Tenggara, Central Kalimantan, East Kalimantan, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, West Sulawesi, Maluku, North Maluku, Papua, West Papua	539,356,769,394	36,942,244	10-20 years	N/A	Improved service capacity discharge at 4.10 m3/s of the national standardised target of raw water structures and infrastructure built that originates from the construction/ rehabilitation of 585 raw water units and 50 km groundwater irrigation networks, benefiting areas prone to flood and drought in the serviced provinces	3, 9, 13, 14	Ministry of Public Work & Housing
4	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Development and rehabilitation of surface, swamp and coastal pond irrigation networks	Development and rehabilitation of surface-water/ swamp/coastal pond irrigation networks under the central government authority, including the dams and canals, and wetland area conservation.	North Sumatra, West Sumatra, Riau, Jambi, Riau islands, South Sumatra, Lampung, Banten, West Java, Special Region of Yogyakarta, East Java, Central Kalimantan, South Kalimantan, East Kalimantan, North Kalimantan, West Sulawesi, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, Maluku, North Maluku, West Nusa Tenggara, East Nusa Tenggara, Papua	964,665,940,120	66,073,010	10-20 years	N/A	Enhanced service capacity of water supply for ±213,162 hectares of agricultural areas that are prone to flood and drought supported by the development/ rehabilitation of 16 units of irrigation area along with 407 km water surface/swamp/ coastal pond irrigation networks	6, 11, 13	Ministry of Public Works and Housing

5	Sustainable Water and Wastewater Management	Development of agricultural infrastructure for efficient water management	Management of dams, lakes and other water storage facilities	Development of dams, embung (artificial lakes), and other water storages, as well as revitalisation of lakes, including land procurement and construction.	North Sumatra, West Sumatra, Riau Islands, Lampung, Banten, West Java, Central Java, Special Region of Yogyakarta, East Java, South Kalimantan, East Kalimantan, North Kalimantan, West Sulawesi, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, North Maluku, Maluku, West Nusa Tenggara, East Nusa Tenggara, Papua, West Papua	733,615,702,939	50,247,651	10-20 years	N/A	Enhanced reservoir storage capacity of dams and other water storages at ±559 million m3 supported by the on-going development and rehabilitation of 71 dams, 2 lakes, and 22 rain-fed water storage (embung)	6, 11, 13	Ministry of Public Work & Housing

Table 1.8 – Financing Projects of the 2021 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2021[6])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Planning, Development, and Supervision of New, Renewable Energy and Energy Conservation Infrastructure	Installation of 23 units of rooftop solar PV plants on the State's border stations and 2 volcano observation stations, which aims to encourage the adoption of the rooftop solar PV by public and private sector. Recently, Ministry of Energy and Mineral Resources issued a regulation to allow the electricity consumers to feed any excess electricity back into the grid.	West Kalimantan, East Kalimantan, Southeast Kalimantan, East Nusa Tenggara, West Papua, East Java, and Maluku	28,659,728,000	1,962,995	5 years	136.86 tonnes	150 kWp power generated	7, 9, 13	Ministry of Energy and Mineral Resources
2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Development of Surface, Swamp, and Non-Paddy Irrigation Network	Construction of canal blockings at Bulungan Peat Hydrological Unit area, as one of the approaches to restore the degraded peatland ecosystem area. The area includes to Sesayap, Mahakam, and Berau-Kelai Riverine Management Area. The canal blocking constructions increase the water level and re-wet the peatland area to avoid forest and peatland fires.	Special Capital Region of Jakarta, North and East Kalimantan	102,894,243,456	7,047,551	5 years	N/A	North Kalimantan: 1.8 km long canal, benefiting ±120 hectares; East Kalimantan: 2 km long canal benefiting ±100 hectares	2, 6, 12, 13, 15	Ministry of Public Works and Housing
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Flood and Lava Control, Urban Drainage Management, and Coastal Protection	Coastal protection structures consist of seawalls and breakwaters. The coastal protection construction aims to withstand abrasion from waves that continue to erode coastal areas, tidal flooding and sea level rise. The development is prioritized at residential areas and public facilities of fishermen settlements, as one of the climate vulnerable communities, as well as in special economic zones and tourism areas.	Banten, West Java, East Nusa Tenggara, Gorontalo Provinces	636,022,399,286	43,563,178	5-25 years	N/A	Banten: 3.5 km, West Java: 1.5 km, East Nusa Tenggara: 0.1 km	3, 8, 11, 13	Ministry of Public Works and Housing
4	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Development of Drinking Water Supply System	The drinking water supply system development includes the construction, expansion and improvement of reservoirs, intakes, transmission pipes, water treatment plants as well as the main and secondary networks at regional level that serves 3 to 4 neighbouring municipalities. The development is prioritized at areas prone to prolonged drought or flooding due to the impact of climate change and improve the drinking water supply debit.	North Sumatera, Riau, Special Region of Yogyakarta	1,364,452,917,517	93,455,679	25 years	N/A	Improve drinking water supply debit within 750 to 2,000 litre/second on average, which potentially serve about 180,000 household connections or about 900,000 individuals	6, 13	Ministry of Public Works and Housing
5	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Public health management	Provision of Access Towards Liveable Housing	The activities include the construction of buildings, infrastructure, public supporting facilities and the furniture. The flat development is purposed for the low-income labours, vulnerable communities, students, and government officers.	Jambi, Lampung, Banten, West Java, DI Yogyakarta, East Java, South Kalimantan, Papua	880,750,244,892	60,325,359	15 years	N/A	685 building units with 41,831 m2 floor area and their supporting infrastructure and facilities were constructed, benefiting 2,055 to 2,740 tenants	3, 6, 7, 11, 13	Ministry of Transportation

[6] Financing Projects of the 2021 Global Green Sukuk Issuance are projects implemented in 2021. Per 31 December 2021, the total amount allocated to financing is 49.05% of the 2021 Global Green Sukuk proceeds (USD 750 million). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

6	Sustainable Transport	Transportation network upgrade to higher climate resilient design standard	Construction and management of railways infrastructure and supporting facilities, the safety and security; and the railway transportation service	The activities include construction and enhancement of new and existing railway infrastructure and the supporting facilities, as well as enhancing the safety and security facilities. The railways improve intercity connection in North and West Sumatra Provinces as well as on Java Island. In addition, the Ministry of Transport develops urban railway system operating at high levels of performance for airport trains in Solo City of Central Java.	North Sumatera, West Sumatera, Special Capital Region of Jakarta, West Java, Central Java, East Java Provinces	651,382,448,487	44,615,236	10 years	tbc	Increased number of passengers and goods, length of network, frequency of service. Shifting of and reducing road transport's load	7, 8, 9, 11, 13	Ministry of Transportation
7	Sustainable Transport	Transportation network upgrade to higher climate resilient design standard	Train Transportation Connectivity Infrastructure	The project includes enhancement of railway tracks and supervision of Light Rail Transit (LRT) in Palembang City of South Sumatra Province. This LRT connects the airport to the city centre, operating at high levels of performance, especially with regard to travel times and passenger carrying capacity.	South Sumatera	689,951,315,000	47,256,939	15 years	tbc	Increased number of passengers and goods transported, length of network, frequency of service; Shifting of and reducing road transport's load	7, 8, 9, 11, 13	Ministry of Transportation
8	Green Building	Green Building	Development of Housing and Buildings	The activities include construction and rehabilitation of buildings that meet the green and environmental friendly criteria and indicators set by the Government. Recently, the Ministry of Public Work and Housing issued a ministerial regulation to provide the standard and performance indicator assessment. In 2021, the green building construction was implemented at market and university buildings.	Special Capital Region of Jakarta, Lampung, North Sumatera	109,589,201,916	7,506,110	10 years	tbc	10,371 m2 floor-sized green buildings were constructed or retrofitted; the Aksara Traditional Market in Medan provides 670 kiosks benefiting for 670 MSMEs	3, 6, 7, 11, 13	Ministry of Public Works and Housing
9	Waste and Waste to Energy Management	Improving waste management	Improvement of Municipal Solid Waste Management System at Regional- and City-scale	In 2021, the Ministry of Public Work & Housing (MOPWH) implemented the development of decent sanitation services, which cover municipal solid waste (MSW) management and sewerage management systems. For the MSW, 1 regional-scale sanitary landfills that serve 3 municipalities, and 11 city scale landfills were developed and revitalised. Some of the landfills are supported with facilities for applying 3R principle (reduce, reuse and recycle), leachate treatment, and one landfill for waste to energy generation. For municipal sewerage system, off-site domestic wastewater management systems for regional scale were developed in six cities and one national strategic tourism area. The constructions included wastewater treatment plants, and the piping network, which connect household and business areas.	South Sumatera , Sulawesi Selatan, Special Region of Yogyakarta, Riau, North Sumatera	913,558,418,802	62,572,494	10 years	tbc	Improvement of community waste management, prevention of leachate water pollution; Expected number of beneficiaries for the MSWs are 865,357 households, while for sewerage system are 75,780 households	3, 6, 7, 11, 13, 14, 15	Ministry of Public Works and Housing

Note:

a. The type of projects refers to 15 eligible sectors under the Republic of Indonesia SDGs Government Securities Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The Republic of Indonesia SDGs Government Securities Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/governmentsecuritiesframework. The currency exchange rate is based on the State Budget Assumption for 2021 budget year of IDR 14,600 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.9 – Refinancing Projects of the 2021 Global Green Sukuk Allocation

(This table includes projected impacts reported for the refinancing projects - 2017[7])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Development and Management of Sea Transportation and Traffic sub-sector	Installation and revitalisation of solar PV powered aids to navigation at sea to enhance the sea safety transportation and traffic services. The devices include solar PV for lighthouses, beacons and flare buoys.	Special Capital Region of Jakarta	2,378,308,332,581	162,897,831	5-10 years	4,972 tonnes	Reduce energy consumption intensity. More efficient operation of shipping navigation facilities	7, 13, 14	Ministry of Transportation
2	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Railways Infrastructure and Supporting Facilities	Improvement of Greater Jakarta urban railway infrastructure and supporting facilities and their management. These include the improvement of double-double track railways.	Special Capital Region of Jakarta	1,962,126,674,298	134,392,238	10 years	197,564.81 tonnes	Upgrading gateway of urban and intercity railways to double-double track in Jakarta and Bekasi area	7, 8, 9, 11, 13	Ministry of Transportation
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Construction of surface irrigation networks	Rehabilitation and enhancement of civil works and their primary and secondary channel system at surface irrigation areas, which are under the authority of central government. The projects were implemented particularly at rice and crop production centres.	Central Java, Special Region of Yogyakarta, South Sulawesi	1,244,270,145,378	85,223,983	5-10 years	N/A	286.22 km irrigation network system enhanced, which irrigates rice-field/crop areas at 63,448.97 hectare in total in Central Java, DI Yogyakarta and South Sulawesi; Increased in cultivation intensity index at irrigation area ranging from 100% to 245% and from 230% to 290%	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing

Notes:

a. The type of projects refers to 9 eligible sectors under the Republic of Indonesia Green Bond/ Sukuk Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The Republic of Indonesia Green Bond and Green Sukuk Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/page/load/2058. The currency exchange rate is based on the State Budget Assumption for 2021 budget year of IDR 14,600 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

[7] Refinancing Projects of the 2021 Global Green Sukuk Issuance are projects implemented in 2017. Per 31 December 2021, the total amount allocated to financing is 50.95% of the 2021 Global Green Sukuk proceeds (USD 750 million). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

Table 1.10 – Financing Projects of the 2020 Retail Green Sukuk (ST-007) Allocation

(This table includes projected impacts reported for financing projects - 2020[8])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Railways Infrastructure and Supporting Facilities	The project aims at improving public transport, which included development and maintenance of railways and bridges as parts of Greater Jakarta Commuter Line and Southern Java Double Track railways and supporting facilities.	South Sumatera, West Java	2,532,893,416,136	175,895,376	15 years	1,105,491.6 tonnes	Increased number of passengers and goods transported, length of network, frequency of service; Shifting of and reducing road transport's load	8, 9, 11, 13	Ministry of Transportation
2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Management of Dam, Lake, and Other Water Retention Facilities	Construction of smaller dam (*embung*) and other water retention facilities for water resource conservation to be used for enhancing water supply capacity for agriculture and aquaculture, raw water needs, and flood/drought control.	South Sumatera	118,921,491,183	8,258,437	10-20 years	N/A	Dam surface area at 1 hectare and water stored volume at 4,000 m^3, protecting 2 villages from flood/ drought risks, and potential additional economic benefits from local tourism	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Construction of surface irrigation networks	Construction and rehabilitation of civil works and their primary and secondary channel system at surface irrigation areas, which are under the authority of central government.	West Sumatera	48,634,934,000	48,634,933,928	5-10 years	N/A	Increasing water availability and changing paddy field cropping patterns from rain-fed to technical irrigation with additional potential coverage of 3,273 Ha	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing

Table 1.11 – Refinancing Projects of the 2020 Retail Green Sukuk (ST-007) Allocation

(This table includes projected impacts reported for refinancing projects - 2017[9])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Construction, Rehabilitation, and Maintenance of Airport Infrastructures	Installation and rehabilitation of solar-powered and LED bulbs street-lightings and air navigation at airport facilities to improve the safety and clean energy.	Papua, North Sulawesi, Central Sulawesi, Southeast Sulawesi, North Sumatra, East Nusa Tenggara, West Sulawesi, West Papua, West Nusa Tenggara, Banten, West Kalimantan, Central Kalimantan, Central Java, South Sulawesi, North Maluku, Riau Islands, Gorontalo, Maluku, Bengkulu	1,188,133,771,363	82,509,290	5 years	5,823 tonnes (from solar-powered street lights) and 4,463 tonnes (from rooftop solar power plants)	Reduce energy consumption intensity	7, 13, 14	Ministry of Transportation

[8] Financing Projects of the 2020 Retail Green Sukuk Issuance are projects implemented in 2020. Per 31 December 2020, the total amount allocated to financing is 49.4% of the 2020 Retail Green Sukuk proceeds (IDR 5.4 trillion). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

[9] Refinancing Projects of the 2020 Retail Green Sukuk Issuance are projects implemented in 2017. Per 31 December 2020, the total amount allocated to financing is 50.6% of the 2020 Retail Green Sukuk proceeds (IDR 5.4 trillion). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

2	Renewable Energy	Generation and transmission of energy from renewable energy sources	Development and Management of Sea Transportation and Traffic Infrastructure and Supporting Facilities	Installation and revitalisation of solar PV powered aids to navigation at sea to enhance the sea safety transportation and traffic services. The devices include solar PV for lighthouses, beacons and flare buoys.	Special Capital Region of Jakarta	50,463,333,151	3,504,398	5 years	tbc	Reduce energy consumption intensity; more efficient operation of shipping navigation facilities	7, 13, 14	Ministry of Transportation
3	Renewable Energy	Generation and transmission of energy from renewable energy sources	Development and Management of Activities in the Port and Dredging Sector	Development of a sustainable and efficient ports' operational and management with green initiatives (eco-port). One of which is the installation of solar PV in the port's neighbouring area.	Special Capital Region of Jakarta, Maluku	8,146,945,000	565,760	5 years	tbc	Reduce energy consumption intensity; more efficient operation of shipping navigation facilities	7, 13, 14	Ministry of Transportation
4	Energy Efficiency	Improvement of the Energy Efficiency of Infrastructure	Development and Management of Activities in the Shipping and Marine Sector	Development of supporting infrastructure and facilities for implementing short sea shipping service instead of deep-sea shipping. The shipping service takes advantage of coastal-to-coastal ports	Special Capital Region of Jakarta	33,452,656,600	2,323,101	10 years	tbc	Fossil-fuel saving; increased number of transported people and goods; and inter island connectivity improvement	7, 9, 13	Ministry of Transportation
5	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Plantation Protection Support	The activities consist of establishment of plantation commodity-based organic farming villages and mitigation – adaptation measures at plantation sub-sector in drought-prone provinces. These included the introduction of environmental-friendly cultivation practices based on the local agro-ecosystems and biodiversity potential, and conversion of conventional to organic plantations. The activities provided support of ruminant livestock as a source of organic fertilizer, composting house, organic fertilizer production, and organic training and certification. In addition, the activities include the establishment of retention ponds (*embung*), and water and sediment infiltration holes (bio-pores and *rorak*) in the agricultural area.	South Sumatra, North Sulawesi, Central Kalimantan, East Java, West Nusa Tenggara, South Sulawesi, Central Java, Lampung, Aceh, West Sumatra, West Java, West Papua, Southeast Sulawesi, Banten, East Nusa Tenggara, North Maluku, North Sumatra, Maluku, West Kalimantan, Central Sulawesi, Jambi, West Sulawesi, Yogyakarta, Banten, West Nusa Tenggara	9,164,619,824	636,432	7 years	N/A	1) Increased farmers' income in 86 villages through organic farming, organic produces, diversification, and composting; and 2) increased income of 4 farmer groups in 4 drought-prone provinces through efficient production costs, increased farming productivity from water supply, and composting	1,2,8,13	Ministry of Agriculture
6	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Development of Irrigation Water for Agriculture	Construction and rehabilitation of tertiary/ quaternary swamp irrigation networks and the complementary buildings, as well as other supporting facilities to improve the swamp irrigation functions and services. Therefore, the swamp areas are optimally utilised.	Jambi, South Sumatra, Bangka Belitung Islands, South Kalimantan, Central Kalimantan	80,823,747,000	5,612,760	5-10 years	N/A	Swamp water irrigation covering an area of 10,000 Ha are developed	1,2,8,13	Ministry of Agriculture
7	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Development of (Serealia) Cereal Crop Production	Facilities for the application of various rice varieties and cultivation technologies at irrigated and rainfed land areas to enhance the rice productivity and production, and to introduce mitigation and adaptation measures in agriculture. It consists for adaptation action (Inbred rice field/rainfed land area of 731,925 ha, special rice cultivation at 75 ha, hybrid rice at 60,000 ha, Hazton rice at 45,364 ha, Salibu rice at 10,000 ha, Minapadi at 4,000 ha) and for mitigation action (Organic rice at 14,000 ha, Jarwo Super at 10,000 ha, Lebak swamp rice at 650 ha)	All provinces except Riau Islands	836,769,888,402	58,109,020	3-5 years	N/A	Total output of the rice cultivation in FY 2017 was 876,014 Ha	1,2,8,13	Ministry of Agriculture

8	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Management of the Supply and Monitoring System of Agricultural Machine/ Tools	Distribution of pre-harvest agricultural equipment and machinery assistances, including 2-wheel tractor, 4-wheel tractor, water pump, rice transplanter, hand sprayer and cultivator.	All provinces	444,890,679,213	30,895,186	5 years	N/A	The distributed 2-wheel tractor assistance was 26,091 units, 4-wheel tractor was 2,873 units, water pumps were 19,615 units, rice transplanters were 2,952 units, hand sprayers were 22,923 units, and cultivators were 3,733 units	1,2,8,13	Ministry of Agriculture
9	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Strengthening the Protection of Food Crops from the Disturbance of Plant Pest Organisms and Impacts of Climate Change	Facilities for strengthening the food crop protection from plant pest organisms as parts of adaptation measures by promoting 1) area demonstration for controlling brown stem planthopper toward healthy plant cultivation, 2) implementation of integrated pest control, and 3) application of climate change impact management in the farmer's land areas.	All provinces except Papua, North Kalimantan, Riau Islands	114,380,309,170	7,943,077	10 years	N/A	25 units injecting wells for activity no.3	1,2,8,13	Ministry of Agriculture
10	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food Security	Increasing Animal Feed Production	The activities include 1) development of forage to support the project of special effort for encouraging breeding cows become pregnant (UPSUS SIWAB project), either grass or legumes 2) mixing with additive concentrates to improve cows/buffaloes that are indicated to contract a reproductive disorder due to malnourishment, development of 3) pastures and 4) forage plantations. The activities are to facilitate the development of feed ingredients, forage, processed feeds, as well as improving the quality, safety, and forage registration	South Sulawesi	57,286,000	3,978	3 years	N/A	1) Forage supporting the UPSUS SIWAB at 6,953 Ha on 29 Provincial working units; 2a) Additive concentrate development to support the UPSUS SIWAB amounting 2,787 tons in 13 provincial working units; 2b) Additive concentrate development in 10 regional technical offices at 7,371 tons; 3) pastures at 9 regional technical offices covering 605.07 Ha; 4) forage plantations in 10 regional technical offices covering 459.80 Ha	1,2,8,13	Ministry of Agriculture

Notes:

a. The type of projects refers to 9 eligible sectors under the Republic of Indonesia Green Bond/ Sukuk Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The Republic of Indonesia Green Bond and Green Sukuk Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/page/load/2058. The currency exchange rate is based on the State Budget Assumption for 2020 budget year of IDR 14,400 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.12 – Financing Projects of the 2020 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2020[10])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Provision and Management of Ground Water and Raw Water	The project aims at improving raw water service for domestic consumption and social & economic productivity, namely for agricultural, industrial, urban and other strategic areas. The project components include development of the infrastructure and supporting facilities for raw water provision originated from surface and ground water or other existing sources. The activities cover natural/artificial polders/retention basins and raw water unit development.	All provinces except Bengkulu, Gorontalo, Central Sulawesi, Bali	555,833,911,820	38,599,577	5-10 years	N/A	Fulfillment of raw water needs of 275,5353 m3 per second	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing
2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Flood and Lava Control, Urban Drainage Management, and Coastal Protection	The project aims at improving water resource infrastructure resilient to water potential damages risks, both of hydrometeorogical or natural disaster particularly floods from urban to coastal areas. It includes normalisation of river bank and dikes, water canal, sluices, polder retentions, and check dams/ sabo dams.	All provinces except Lampung, Central Kalimantan, Central Sulawesi, Maluku	1,493,195,870,681	103,694,158	5-25 years	N/A	Strengthening of cliffs to protect area of 728.6 Ha; Flood control of 1191.8 Ha of areas	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Management of Dam, Lake, and Other Water Retention Facilities	The project aims at improving water reservoir integrated with and for supporting the irrigation network system development and rehabilitation project for achieving national food security. The project activities include development and rehabilitation of new and existing dams and polder/ water retentions.	Aceh, North Sumatera, South Sumatera, Bangka Belitung Island, Lampung, DKI Jakarta, West Java, Banten, Central Java, DI Yogyakarta, East Java, Central Kalimantan, South Kalimantan, North Kalimantan, South Sulawesi, Southeast Sulawesi, West Sulawesi, Bali, West Nusa Tenggara, East Nusa Tenggara, Maluku, Papua	1,911,865,541,963	132,768,440	20-30 years	N/A	Irrigation water supply for paddy fields covering an area of 7855.65 Ha; Raw water supply of 86.78 cubic m per second; Flood reduction of 533.57 cubic m per second	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing
4	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Development and Rehabilitation of Water Surface Irrigation Network	The project aims at improving the irrigation network system's performance and efficiency by applying a modernised irrigation concept to support national food security. Based on the location, the project is planned to improve rain-fed to irrigated ricefields. The project components include development & rehabilitation of water irrigation infrastructure & service, management system, and strengthening the operation & management capacity of the institutions & human resources.	All provinces except Riau Island, West Kalimantan, Bali, and West Papua	1,385,865,503,242	96,240,660	tbc	N/A	tbc	3, 5, 6, 8, 10, 11, 13	Ministry of Public Works and Housing

10 Financing Projects of the 2020 Global Green Sukuk Issuance are projects implemented in 2020. Per 31 December 2020, the total amount allocated to financing is 49.59% of the 2020 Global Green Sukuk proceeds (USD 750 million). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

5	Sustainable Transport	Transportation network upgrade to higher climate resilient design standard	Development and Management of Railway Transportation Infrastructure and Supporting Facilities	The project aims at improving public accessibility and safety & security as an alternative shifting to already heavy-burden road with private vehicles in order to enhance inter-regional connectivity. The project include development and maintenance of parts of Greater Jakarta Commuter Line and Southern Java Double Track railways and supporting facilities.	DKI Jakarta (Greater Jakarta Commuter Line), Central Java (South Java Double track)	8,952,704,665	621,716	10 years	Greater Jakarta Commuter Line: 172,001 tonnes (2020) & 557,522 (2019); Southern Java Double Track: 121,850 tonnes	Southern Java Double Track is expected to increase passenger-km by 1.3 times (or 2,547,965,852 passengers are expected to shift from bus/ private car/ motorcycles); and reduce travel time by an average of 30 minutes	8, 9, 11, 13	Ministry of Transportation

Table 1.13 – Refinancing Projects of the 2020 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2018[11])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Management of Irrigation Water for Agricuture	To ensure the water irrigation supply for enhancing quality and quantity of rice (food security), the project implemented rehabilitation of tertiary irrigation network, development of retention basin (embung) for agriculture, and development of other water source by pumping and piping irrigation and ground water usage. The locations selection were focused on rice production centre prone to drought.	All provinces except Riau Islands	327,117,407,450	22,716,487	-	N/A	134,700 Ha rehabilitated tertiary irrigation network, 400 units retention basin (embung) for agriculture built, and 1,071 units of other water source developed	1, 2, 8, 13	Ministry of Agriculture
2	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Expansion and protection of agriculture lands	Recent ricefields conversion to other landuses has been unavoidable, which threats the national food security and self-sufficiency programme. Ministry of Agriculture targetted 12,000 Ha of new and revitallised ricefileds which were focused on area of rice production centre prone to drought in 22 provinces.	Aceh, West Java, West Sumatera, Jambi, South Sumatera, Lampung, West Kalimantan, Central Kalimantan, South Kalimantan, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, Maluku, East Nusa Tenggara, Papua, Bengkulu, North Maluku, Riau Islands, West Papua, and West Sulawesi	174,808,438,544	12,139,475	-	N/A	Realization of 9,472 Ha (79%) of the target of 12,000 Ha	1, 2, 8, 13	Ministry of Agriculture
3	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Drought management	Supervision and development of Drinking water supply system	The project aims at expanding and improving public access to safe drinking water at urban and rural areas with pipeline network and from non-pipeline network. The project to cover pipeline and non pipeline network development, improving the standardised drinking water quality, and reducing the water losses.	All provinces except Yogyakarta and South Sumatera	649,118,443,950	45,077,670	10 years	N/A	1,236,000 people are expected to benefit from the project	6, 13	Ministry of Public Works and Housing

11 Refinancing Projects of the 2020 Global Green Sukuk Issuance are projects implemented in 2018. Per 31 December 2020, the total amount allocated to refinancing is 51% of the 2020 Global Green Sukuk proceeds (USD 750 million). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

4	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Public health management	Supervision and development of settlement areas	The development and supervision of residential areas, both in urban, rural and special areas such as outer island and border area aims at improving the environment quality and basic services for infrastructure and facilities that meet Minimum Service Standard in housing sector. Achieving zero target of slum areas is the focus of the project in urban area. For rural areas, the focus is development of road access, drainage and drinking water, to enhance the productivity.	All Provinces	2,414,614,630,848	167,681,572	5 - 10 years	N/A	Expected 14.746 Hectare benefit the project.	11.12	Ministry of Public Works and Housing
5	Sustainable Transport	Transportation network upgrade to higher climate resilient design standard	Construction and Management of Railways Infrastructure and Supporting Facilities	Development of double track railways connecting Kroya and Kutoarjo with 76km in length is part of the national priority multi-year contract project of Java's South Line Double Track. The project aims at improving the passenger-km and safety of transporting passengers and logistics. The project components include development of railways and the supporting facilities.	Central Java and East Java	593,748,602,651	41,232,542	10 years	South Java Double Track line has not yet been activated	Not yet activated	8, 9, 11, 13	Ministry of Transportation
6	Sustainable Transport	Transportation network upgrade to higher climate resilient design standard	Construction and Management of Railways Infrastructure and Supporting Facilities	The project aims at enhancing and maintenancing the existing railway infrastructure's capacity and safety, and to expand number of travelling schedules for passengers and logistics. The activities include maintenance and adding part of double track railways of Southern Java, respectively.	DKI Jakarta and Banten (Greater Jakarta Commuter Line), West Java, Central Java, East Java (South Java Double track)	184,422,350,664	12,807,108	10 years	Greater Jakarta Commuter Line: 564,345 tonnes	Speed up train travel time and increase the efficiency of flow of passengers & goods - reducing fuel consumption	8, 9, 11, 13	Ministry of Transportation
7	Waste to Energy and Waste Management	Improving waste management and Rehabilitation of landfill areas	Supervision and development of settlement sanitation	While municipal solid waste management focuses to reduce number of waste disposed to landfill by applying 3R principles, the MOPW priorities to develop regional landfill for 3-4 ciities, and improve the carrying capacity and management from open dumping to sanitary landfills.	All provinces except Banten	1,163,691,459,558	80,811,907	5-10 years	tbc	2,059,094 households are expected to benefit from the improved waste management	11, 13	Ministry of Public Works and Housing

Notes:

a. The type of projects refers to 9 eligible sectors under the Republic of Indonesia Green Bond/ Sukuk Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The Republic of Indonesia Green Bond and Green Sukuk Framework against which the allocation of the amount committed was assessed is available at https://www.djppr.kemenkeu.go.id/page/load/2058. The currency exchange rate is based on the State Budget Assumption for 2020 budget year of IDR 14,400 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed - the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.14– Financing Projects of the 2019 Retail Green Sukuk (ST-006) Allocation

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Construction of Flood Control Facilities	Construction of retention ponds/ polders, flood canals, dikes, checkdam, and river maintenance and normalization. It aims to reduce the risk of flooding due to increased rainfall intensity and land use changes.	West Sumatera, South Sumatera, Bengkulu, Jambi, Bangka Belitung Islands, West Java, South Kalimantan, Central Kalimantan, West Papua	729,977,250,000	48,665,150	5-10 years	N/A	Sediment control of 0.32 million cubic m; improvement of flood facilities and infrastructure for 27,998.5 ha of areas	3, 5, 6, 8, 10, 11	Ministry of Public Works and Housing

Notes:
a. The type of projects refers to 9 eligible sectors under the Republic of Indonesia Green Bond/ Sukuk Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The currency exchange rate is based on the State Budget Assumption for 2019 budget year of IDR 15,000 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

Table 1.15 – Financing Projects of the 2019 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2019[12])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Planning, Development and Supervision of New, Renewable Energy and Energy Conservation Infrastructure	Construction of new and renewable energy infrastructure, with a focus on areas outside current electricity coverage. The project aims to improve the electrification ratio in off-grid areas across the country. Power generation is sourced from solar and biogas power plants.	All Provinces across Indonesia	24,565,622,607	1,637,708	5-20 Years	tbc	tbc	7, 8, 9, 11, 13	Ministry of Energy and Mineral Resources
2	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Railways Infrastructure and Supporting Facilities in Sumatera	Construction of the Trans Sumatra Railway from Aceh to Lampung province. The Trans Sumatra Railway causes a mode shift from road transport to rail transport and logistics.	Aceh, North Sumatra, West Sumatra, and South Sumatra	155,006,799,295	10,333,787	5 Years	572324.25 tonnes	Streamlining the flow of passengers & goods; Moving / shifting, especially the transportation of goods, from trucks (road-based transportation) to the use of railway	8, 9, 11, 13	Ministry of Transportation

[12] Financing Projects of the 2019 Retail Green Sukuk Issuance are projects implemented in 2019. Per 31 December 2020, the total amount allocated to financing is 100% of the 2019 Retail Green Sukuk proceeds (USD 104.4 million). Any amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account.

3	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Double Track Railways Infrastructure and Supporting Facilities in Java Line	Construction of the double track railway project in the Trans Java railway's northern and southern sections, upgrading the single-track railway.	North and South Java Line	4,082,935,380,746	272,195,692	10 years	179 159.80	Speed up train travel; Streamlining the flow of passengers & goods to reduce fuel consumption	8, 9, 11, 13	Ministry of Transportation
4	Waste to Energy and Waste Management	Improving waste management	Improvement of Municipal Solid Waste Management System	Improvement of basic waste management infrastructure services through the development of city, regional and special area-scale of final disposal sites.	Bali, North Sulawesi, Riau, Bengkulu, Lampung, Central Java, East Java, East Kalimantan, North Sulawesi, Central Sulawesi, West Nusa Tenggara	95,515,488,349	6,367,699	5-10 years	tbc	150,701 number of households received the benefit	11, 13	Ministry of Public Works and Housing
5	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Construction of Flood Control Facilities	Construction of retention ponds/ polders, flood canals, dikes, checkdam, and river maintenance and normalization. It aims to reduce the risk of flooding due to increased rainfall intensity and land use changes.	West Java, Central Java, Yogyakarta, North Sumatera, West Sumatera, South Sulawesi, Maluku, Bali	1,203,257,339,249	80,217,156	5 Years	N/A	Sediment control of 0.32 million cubic meter; Improvement of flood facilities and infrastructure for 27,998.5 ha of area	3, 5, 6, 8, 10, 11, 16	Ministry of Public Works and Housing

Table 1.16 – Refinancing Projects of the 2019 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2017[13])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Development of New, Renewable Energy and Energy Conservation Infrastructure	Construction of new and renewable energy infrastructure, with a focus on areas outside current electricity coverage. The project aims to improve the electrification ratio in off-grid areas across the country. Power generation is sourced from solar, mini hydro, and micro hydro power plants.	Papua, West Papua, East Nusa Tenggara, South Sulawesi, Central Sulawesi, North Sulawesi, South East Sulawesi, South Kalimantan, North Kalimantan, East Kalimantan, West Sumatera, Riau, Gorontalo, West Kalimantan, North Sumatera, East Java, and Central Java	466,124,669,889	31,074,978	5-20 Years	134,872.41 tonnes	15,607 households with electricity; 7,429 kW power generated; Improves electrification ratio, 48 m3 biogas communal, 930 unit public street and battery	7, 8, 9, 11, 13	Ministry of Energy and Mineral Resources
2	Renewable Energy	Generation and transmission of energy from renewable energy sources	Installation of Energy-Saving Solar Energy Lights in the Rural Area	Installation of energy saving solar-powered lamps in areas with limited or no electricity facilities. These lamps would improve accessibility to lighting for off-grid areas while reducing use of diesel generators.	Papua, West Papua, Maluku, West Nusa Tenggara, and Riau	128,240,804,087	8,549,387	3 Years	1,184,748 tonnes	79,556 Units installed, providing households with lighting	7, 11, 13	Ministry of Energy and Mineral Resources

[13] Refinancing Projects of the 2019 Global Green Sukuk are projects implemented in 2017. Per 31 December 2019, the total amount allocated to re-financing projects is 51% of the 2019 Global Green Sukuk proceeds (USD 750 million). Any committed (realisation) amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account

3	Waste and Waste to Energy Management	Improving waste management	Improvement of Municipal Solid Waste Management System	Improvement of basic waste management infrastructure services through the development of city, regional and special area-scale of final disposal sites.	All provinces except East Kalimantan	946,876,131,375	63,125,075	5-10 years	In order to achieve 48,000,000 tonnes target set in RAN-GRK	2,036,660 number of households received the benefit	11, 13	Ministry of Public Works and Housing
4	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Installation of Navigation Facilities	Construction, rehabilitation and replacement of marine navigation aids and the installation of solar cells to power marine navigation aids. The shift towards solar powered marine navigation aids reduces the use of fossil-fuel sources of power.	Jakarta, Central Java, East Java, Aceh, North Sumatera, West Sumatera, Riau, South Sumatera, West Kalimantan, South Kalimantan, East Kalimantan, North Kalimantan, North Sulawesi, South Sulawesi, South East Sulawesi, Maluku, Bali, East Nusa Tenggara, Papua, West Papua	1,412,579,774,868	94,171,985	5 Years	141,800 tonnes	2,459 units constructed, improvement in marine transport safety	7, 9, 13	Ministry of Transportation
5	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Improvement of Land Transportation Traffic Management Services	Installation of road traffic equipment such as traffic signs, area traffic control systems (ATCS) and navigation aids for river and lake crossings (SBNP) with energy-saving sensors.	Jakarta, West Java, Central Java, Yogyakarta, East Java	226,499,390,179	15,099,959	5 Years	203,116 tonnes	Reducing traffic congestion and improve safety in river and lake crossings	7, 9, 13	Ministry of Transportation
6	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Railways Infrastructure and Supporting Facilities in Sumatera	Construction of the Trans Sumatra Railway from Aceh to Lampung province. The Trans Sumatra Railway causes a mode shift from road transport to rail transport and logistics.	North Sumatera, West Sumatra, South Sumatra	1,014,879,772,000	67,658,651	10 Years	235,438 tonnes	Construction of 343.2 km of railways, shifting mode in logistics and passenger transport	8, 9, 11, 13	Ministry of Transportation
7	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Double Track Railways Infrastructure and Supporting Facilities in Java North Line	The construction of the double track railway project in the Trans Java railway's northern section, upgrading the single-track railway.	North Java Line	112,081,354,000	7,472,090	10 Years	613,434 tonnes	Upgrading of 338.6 km of doubletrack railway, cut travel time and therefore reduce fuel usage	8, 9, 11, 13	Ministry of Transportation
8	Sustainable Transport	Developing Clean Transportation Systems	Development of Jabodetabek Urban Train	Construction of double-double track of the Jabodetabek urban railway network.	Jabodetabek (Jakarta, Bogor, Depok, Tangerang, Bekasi)	42,307,547,000	2,820,503	10 Years	856,828 tonnes	Shifting mode from private to public transport, with 314,317,883 trips in 2017	8, 9, 11, 13	Ministry of Transportation
9	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Construction, Rehabilitation and Maintenance of Airport Infrastructures	The installation of solar-powered street lights and solar power plants. It improves the energy efficiency of airports and ensure electricity is sourced from renewable sources.	Papua (Tanah Merah & Bokondini), West Papua (Inanwatan), East Nusa Tenggara (DC Saudale), and Bengkulu (Enggano)	1,401,716,524,000	93,447,768	5 Years	10,478 tonnes	Usage of renewable energy to power lighting in airports	7, 9, 13	Ministry of Transportation

Table 1.17 – Financing Projects of the 2018 Global Green Sukuk Allocation

This table includes projected impacts reported for financing projects - 2018[14])

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO_2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources	Planning, Development and Supervision of New, Renewable Energy and Energy Conservation Infrastructure	Development of Renewable Energy and Energy Conservation Infrastructure that includes centralized Solar Power Plant, Micro-hydro Power Plant, Communal Biogas Power Plant, Biogas communal, Biogas Power Plant powered by POME (Palm Oil Mill Effluents), and Biofuel Power Plant.	West Sumatera, Riau Islands, Bangka Belitung, South Sumatera, Lampung, DKI Jakarta, West Java, East Java, West Kalimantan, South Kalimantan, East Nusa Tenggara	336,466,951,000	22,431,130	3-5 years	2,122 tonnes	4,639 kW power generated - improves electrification ratio, 60 m3 biogas communal	7, 8, 9, 11, 13	Ministry of Energy and Mineral Resources
2	Renewable Energy	Generation and transmission of energy from renewable energy sources (minihydro)	Development of Minihydro Power Plants	The projects aims to improve the electrification ratio in off-grid areas at Oksibil (3 MW) & Ilaga (700 kW) District of Papua Provinces. It replaces the existing diesel generators, which was operated in limited operating hours.	Papua	115,178,630,000	7,678,575	5 years	101,483,080,670 tonnes	1,700 kW power generated - improves electrification ratio	7, 8, 9, 11, 13	Ministry of Energy and Mineral Resources
3	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Installation of Energy-Saving Solar Energy Lights in the Rural Area	Distribution of solar-powered LED lightings, which consists of solar panels with a capacity of 20 watt peaks, 4 LED lights equal to 40 watts, and batteries.	Aceh, Bengkulu, Riau, Jambi, West Sumatera, North Sumatera, West Kalimantan, South Kalimantan, Central Kalimantan, North Kalimantan, West Sulawesi, South Sulawesi, Central Sulawesi, South East Sulawesi, East Nusa Tenggara, Papua	595,831,973,000	39,722,132	3 years	127,048,262.4 tonnes	172,996 unit solar saving lamp light up restricted villages	7,11, 13	Ministry of Energy and Mineral Resources
4	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Installation of Energy Efficiency Equipments	Installation of Intelligent Public Street Lighting integrated with Solar Power Plants	North Kalimantan, Aceh, North Sumatera, Riau, West Sumatera, Jambi, Bengkulu, South Sumatera, West Java, East Java, Central Java, South Kalimantan, East Kalimantan, NTT, Gorontalo, Central Sulawesi, South Sulawesi, South East Sulawesi, West Papua, Papua, Maluku, North Maluku	433,075,438,000	32,319,063	3 years	tbc	7,180 kW power generated	7, 8, 9, 11, 13	Ministry of Energy and Mineral Resources

[14] Financing projects of the 2018 Global Green Sukuk are projects implemented in 2018. Per 31 December 2018, the total amount allocated to financing new projects is 54.7% of the 2018 Global Green Sukuk proceeds (USD 1.25 billion). Any committed (realisation) amount exceeding the Green Sukuk proceeds is financed by other sources of fund available in the general treasury account

5	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Food security	Construction of surface irrigation networks authorized by the Central Government	Development and rehabilitation of dams and surface irrigation networks which are the authority of the center and the regions.	tba	3,736,813,225,000	249,120,882	5-25 years	N/A	Fulfillment of irrigation water service needs for rice fields covering an area of 54,111.21 Ha	3, 5, 6, 8, 10, 11, 16	Ministry of Public Works and Housing
6	Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction	Flood mitigation	Construction of Flood Control Facilities	With the increasing rainfall intensity, some areas become more prone to risk of flooding. This is added by land use changes and narrowing river causing higher run-off/stormwater. The projects include construction of retention ponds/ polders, flood canals, controling gates, and pumping stations.	tba	500,334,762,000	33,355,651	10-20 years	N/A	Technical planning and environmental documents for the 23 ha flood control construction; Improvement of flood facilities and infrastructure for 285 ha of area	3, 5, 6, 8, 10, 11, 16	Ministry of Public Works and Housing
7	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Railways Infrastructure and Supporting Facilities in Sumatera	Construction of the Trans Sumatra Railways	North Sumatera, West Sumatera, South Sumatera, Lampung	274,377,549,000	18,291,837	10 years	206,470 tonnes	tbc	tbc	Ministry of Transportation
8	Sustainable Transport	Developing Clean Transportation Systems	Construction and Management of Railways Infrastructure and Supporting Facilities in Greater Jakarta	Construction of Greater Jakarta double-double track railway	Greater Jakarta (DKI, West Java, Banten)	4,541,992,313,000	302,799,488	10 years	169,003.9 tonnes	tbc	tbc	Ministry of Transportation

Table 1.18 – Refinancing Projects of the 2018 Global Green Sukuk Allocation

(This table includes projected impacts reported for the financing projects - 2016)

No.	Sector	Type of Project*a	Project Name	Brief Description	Location*b	Amount Committed (in IDR)*c	Amount Realized (in IDR)*c	Average Project Lifetime*d	Impacts*e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO2e)	Other results *f	Social / SDGs*g	
1	Renewable Energy	Generation and transmission of energy from renewable energy sources (Solar & Hydropower)	Energy Infrastructure Development through Utilization Renewable Energy	Development of 121 renewable energy facilities and infrastructure (Solar power plants, Micro-hydro power plants, and Minihydro power plant construction) to provide rural electrification in off-grid areas, especially in remote areas and small islands.	Solar Power Plant Project: Lampung, West Sumatera, Bengkulu, Riau, Bangka Belitung, Riau Islands, Central Java, Bali, East Nusa Tenggara, Central Kalimantan, North Kalimantan, South East Sulawesi, South Sulawesi, Maluku, North Maluku, Papua, West Papua. Microhydro Power Plant Project: North Sumatera, West Sumatera, Riau, East Nusa Tenggara, North Kalimantan, South Sulawesi, West Sulawesi, Gorontalo, West Nusa Tenggara, Papua. Minihydro Power Plant Project: Papua	785,475,019,429	58,617,539	5 years	13,044.474 tonnes	8,180 kW Power Generated	7, 9, 13	Ministry of Energy and Mineral Resources
2	Renewable Energy	Generation and transmission of energy from renewable energy sources (Biomass)	Utilization of Biofuels	Construction of facilities and infrastructure for storage of biofuels is carried out at 14 locations in 8 provinces of the Fuel Oil Terminal. The construction of storage in the terminal is a solution to the obstacles in the implementation of the Biofuels Mandatory Program and to ensure smooth distribution throughout the nation.	Aceh, South Sumatera, West Java, Central Java, East Java, Bali, Central Kalimantan, South Kalimantan	57,957,116,275	4,325,158	5 years	3,830,609 tonnes (operation starts in 2017)	Distribution of 2,571,569 Kilolitre of biodiesel	7, 9, 13	Ministry of Energy and Mineral Resources
3	Renewable Energy	Generation and transmission of energy from renewable energy sources (Biomass)	Infrastructure Development for Non-electricity Bioenergy	Construction of communal biogas power plants in five schools. The construction of the plants is one form of government promotion on utilising renewable energy from local potential such as human and animal manures to meet the energy needs of the community, especially for lighting and cooking, which previously used LPG.	Agam, Aceh Besar, Kampar, Lebak, and Pandeglang Districts	14,372,942,198	1,072,608	5 years	11,814 tonnes	10 units of digester with a size of 12 m3 with biogas production of 36 m3 / day	7, 13	Ministry of Energy and Mineral Resources
4	Renewable Energy	Generation and transmission of energy from renewable energy sources (Biomass)	Infrastructure Development of Bioenergy Power Plant	Construction of the four biogas power plants of 1 MW capacity run by Palm Oil Mill Effluents (POME), and one unit of 5 MW capacity run by seaweed.	Paser, Lamandau, and Tanah Laut, on Kalimantan Island, and Merangin District, on Sumatra Island	216,554,706,283	16,160,799	5 years	57,666 tonnes	Potential Producing Power Capacity at 7,340 MW	7, 11, 13	Ministry of Energy and Mineral Resources
5	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Application of Clean and Efficient Energy Technology	Installation of intelligent public street lighting integrated with solar power plants, and retrofitting LED lights on existing public street lighting systems.	Smart street lighting at 4915 points in 70 districts/ cities and retrofitted to 7322 LED bulbs in 43 districts/cities	155,020,910,694	11,568,725	5 years	2,325.611 tonnes (Smart Street Lighting) and 7,662.473 tonnes (LED retrofitting)	172.03 Kw power reduced (Smart Street Lighting) 1,081.92 kW power reduced (LED retrofitting)	7, 11, 13	Ministry of Energy and Mineral Resources

6	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Construction of Aid to Navigation Facilities	Provision of 38 navigation facilities such as conventional lighthouses, buoys, fog signals and day beacons with solar PV-based batteries.	21 provinces; West Kalimanatan, South Kalimantan, East Kalimantan, North Kalimantan, North Sulawesi, South Sulawesi, South East Sulawesi, Maluku, Bali, East Nusa Tenggara, Papua, West Papua, Jakarta, Central Java, East Java, Aceh, North Sumatera, West Sumatera, Riau, Riau Islands, and South Sumatera	304,250,500,183	22,705,261	5 years	141,800 tonnes	Project includes provision of 2 flare towers, 111 beacon signs and 18 flare buoys.	7, 9, 13	Ministry of Transportation
7	Energy Efficiency	Improvement of the energy efficiency of infrastructure	Procurement and Installation of Road Equipment	Road Equipment installation includes replacement of existing conventional public street lighting and warning lights system to solar PV-based.	Public Street Lighting is installed in 4,765 points across 28 provinces. Warning lights were installed in 442 points across 19 provinces	53,207,803,750	3,970,732	10 years	615 tonnes	Reduce the use of conventional electricity	7, 11, 13	Ministry of Transportation
8	Sustainable Transport	Developing Clean Transportation Systems	Operation of Double Track Railways in Java's North Path	Construction of 727 km double-track railway project transforms the existing single-track railway connecting Jakarta to Surabaya.	North Java Line	1,528,495,127,708	114,066,801	10 years	613,434 tonnes	Reduction on fuels usage as the project able to cut down the travel time (from 20-22 hrs becomes 16-17 hrs)	8, 9, 11, 13	Ministry of Transportation
9	Sustainable Transport	Developing Clean Transportation Systems	Construction of the Trans Sumatra Railways	Construction of Trans Sumatra line infrastructure and facilities covers development of new tracks and revitalisation of existing tracks, development of new stations, and electric signals system.	Sumatera	1,344,898,942,236	100,365,593	10 years	235,458 tonnes	Shifting mode for logistics transportation as reduction of fuel consumption from transportation using trucks	8, 9, 11, 13	Ministry of Transportation
10	Sustainable Transport	Developing Clean Transportation Systems	Development of Jabodetabek Urban Train	Improvement of passengers facilities through power supply capacity raising, land acquisition, construction of underpasses, flyovers, and pedestrian bridges of the Jabodetabek urban railway network.	Jabodetabek (Jakarta, Bogor, Depok, Tangerang, Bekasi)	1,075,441,700,098	80,256,843	10 years	856,828 tonnes	Shifting passengers from private transportation, reaching average 960,019 passengers / day in 2017	8, 9, 11, 13	Ministry of Transportation
11	Sustainable Transport	Developing Clean Transportation Systems	Procurement of medium-size BRT (Bus Rapid Transit)	Provision of 381 units of medium-sized buses under Bus Rapid Transit system.	All provinces exclude Jakarta	255,966,202,700	19,101,955	10 years	165,704 tonnes	Reduce congestion as people are shifting to public transportation and also development of feeder transportation.	8, 9, 11, 13	Ministry of Transportation
12	Sustainable Transport	Transportation network upgrade to higher climate resilient design standards	Road Equipment Procurement and Installation (ICT-based traffic control system)	Installation of two packages of area traffic control system to secure a smoother traffic flows at intersection area.	Kediri City and Jogjakarta Province	10,762,305,000	803,157	10 years	203,116 tonnes	More efficient fuel consumption as less traffic jam and controlled vehicle speed	9, 11, 13	Ministry of Transportation
13	Sustainable Transport	Developing clean transportation systems	Development of pioneer sea transport	Modernization of 100 vessels with more energy efficient engines.	Jakarta	1,500,012,910,000	111,941,262	10 years	5,868 tonnes	Improve of Sea Transportation connectivity and less fuel consumption	7, 9, 11, 13	Ministry of Transportation

14	Waste to Energy and Waste Management	Improving waste management	Improvement of Municipal Solid Waste Management System at City-scale	Improvement decent basic infrastructure services through the development of city area-scale of final disposal sites	All provinces, excluding North Kalimantan	1,126,841,051,045	75,122,737	10 years	tbc	2,770,204 number of households received the benefit	7, 11, 13	Ministry of Public Works and Housing
15	Waste to Energy and Waste Management	Improving waste management	Improvement of Municipal Solid Waste Management System at Regional-scale	Improvement decent basic infrastructure services through the development of city, regional and special area-scale of final disposal sites.	Bandung Regency and Bogor Regency	113,979,203,856	7,598,614	10 years	tbc	683,037 number households received the benefit	7, 11, 13	Ministry of Public Works and Housing

Notes:
a. The type of projects refers to 9 eligible sectors under the Republic of Indonesia Green Bond/ Sukuk Framework.
b. The projects may be implemented in multiple spots on each location mentioned.
c. The currency exchange rate is based on the State Budget Assumption for 2018 budget year of IDR 13,400 per USD.
d. Based on financial life of project.
e. Methodology and assumptions are disclosed in Annex. Tbc: to be confirmed – the respective data will be provided in the next annual report.
f. Additional indicators of the direct impact of the green projects.
g. Most relevant or direct social and/or Sustainable Development Goals impacts, as a result of the project.

V. Interpreting Reported Results

The 2022 Republic of Indonesia Green Sukuk Allocation and Impact Report is developed as a form of transparency and accountability of the issuer, and allows investors to access the details of eligible green projects in accordance with the Republic of Indonesia SDGs Government Securities Framework. The report also serves to provide information on the relevant impacts for both climate mitigation and adaptation projects generated through allocation of proceeds from the Green Sukuk issuance.

Several key result indicators have been selected and quantified where possible, but it is important to take into account the inherent limitations of the data reported. The main considerations applied to adequately interpret the results are as follows:

a. **Scope of Results**
Reporting is based on "ex-ante" estimates of climate and environmental impacts at the time of project appraisal and mostly for direct project effects.

b. **Uncertainty**
In general, consideration in estimating impact indicators and projecting results is based on assumptions which are reasonable due to information available at the time for the actual environmental impact of the projects. Behavioral changes and/or shifts in baseline conditions can cause deviations from projections.

c. **Comparability**
Caution should be taken in comparing projects, sectors, or whole portfolios because baselines (and base years) and calculation methods may be varied.

d. **Partial Project Eligibility**
In cases where the project is only partially eligible for Green Sukuk, the committed amount reported reflects the output level from the Climate Budget Tagging mechanism presented by Project Owners (Line Ministries).

e. **Omissions**
It is worth to note that projects may display benefits across a much wider range of indicators than the ones captured in the impact assessment provided in the report. Therefore, putting exclusive focus on the reported indicators will omit other important development impacts. Where quantitative data is unavailable, qualitative indicators have been included to illustrate other benefits.

f. **Source of Data**
All reported results are derived from the Government of Indonesia's internal data as well as publicly available sources

VI. Annex: Impact Measurement Methodology and Indicators

To ensure that the Green Sukuk investment generates sustainable environmental and/or social outcomes alongside financial returns, the Government of Indonesia is committed to conduct a transparent reporting on the amount of proceeds allocated and utilised as well as the environmental and social impact and progress of the green projects selected as underlying assets, in accordance with the Republic of Indonesia SDGs Government Securities Framework.

Data Evaluation and Selection

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

The data mentioned in this report are those that have been identified and tagged as climate change mitigation and adaptation contributing projects through the Climate Budget Tagging (CBT) mechanism. This mechanism is administered and applied by line ministries/agencies, with reference to the national mitigation and adaptation policy documents in each agency. The collected budget data consist of budget ceiling and realisation, as well as the expected outputs and further clarification from the related line ministries, as project owners. The review and approval processes are coordinated by the Ministry of Finance and Ministry of National Development Planning. The 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 are based on audited numbers by Badan Pemeriksa Keuangan (the Audit Board of the Republic of Indonesia) as per 30 May 2022 for accountability purposes. However, for the 2022 projects, data reported are the amount allocated and committed as of 31 December 2022.

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

Impact Analysis Methodology

The Green Sukuk report refers to the existing national framework and the Harmonized Framework for Impact Reporting (2015) developed by International Capital Market Association (ICMA) for assessing environmental and social impacts in green finance. As one of the Parties to the UNFCCC, Indonesia has proactively initiated the development of frameworks to conduct monitoring, reporting, and verification system for the progress and achievement of the national mitigation actions (RAN-GRK), and adaptation actions (RAN-API), and of the Sustainable Development Goals' indicators. There are five "themes" to categorize the indicators which are used in the report, where applicable. These include 1) Mitigation, as primary indicators, 2) Adaptation, primary, 3) Environment (SDG related) – secondary, 4) Social/ Economic (SDG-related) – tertiary, and 5) Governance/safeguards - tertiary.

Mitigation Indicators

The primary indicator for the mitigation projects is GHG emissions reduction metrics. The calculation methodology is provided from technical guidelines prepared by the Ministry of National Development Planning and related line ministries. Methodology also covers land-based, energy and industry, transport and waste management sectors. The guidelines mainly follow the criteria and formula of the IPCC Guidelines for National Greenhouse Gas Inventories, and other internationally accepted standards.

Sustainable Transport

General indicators for sustainable transport may include transport emissions, renewables, energy efficiency, impacts on environmental resources and environmental risk and damages. Another unit of transport procured and passenger-kilometers (or tonne-kilometers) are also presented. The Ministry of Transportation applies the Tier 1 approach, with general methodology for calculating CO2 emissions in sub-sectors under its management (land, railways, sea, and air transports), which multiplies the estimated fuel consumed (sold) by a 2006 IPCC default CO2 emission factor.

Sustainable Transport: Default Co2 emission factors used by sub-sector

Sub-Sector	Full Type	CO2 (kg/TJ)	CH4 (kg/TJ)	N2o (kg/TJ)
Road Transport	Gasoline	69300	33	3.2
Road Transport	Diesel	74100	39	3.9
Sea Transport	Marine Diesel Oil	74100 3190 (kg/ton)	0.3 (kg/ton)	0.08 (kg/ton)
Railway	Diesel	74100	4.15 (2)	2.86 (1.5)
Civil Aviation	Avtur	74100	2	1.5

Source: IPCC 2006 Mobile Combustion, Ministry of Transportation

Waste Management

Development of landfill and its supporting facilities in districts/ cities funded by the Green Sukuk is relatively new. Therefore, the waste generation and potential methane is still relatively small. In reference to the IPCC 2016 category, most of the developed disposal sites fall into the shallow deep (<5m in depth) category. The current policy of the Ministry of Public Work and Housing, however, requires semi-aerobic management by venting methane gas to manage the production of methane. For the landfills management in several small cities, methane gas is used for gas cooking purpose. Waste to energy facilities are currently under the development phase in larger city landfills, such as Bandung, West Java. In general, landfills have the potential of generating methane. The project is only operating from 2017 onwards - therefore the impact measurement is yet to be calculated due to limited data at this point. However, the government is committed to provide the information on the next report when more data are available.

Resilience Index

The National Vulnerability Index (SIDIK) has been developed by the Ministry of Environment and Forestry to define the vulnerability degree of certain administrative areas or sectors, while the National Resilience Index engaging potential economic loss and the vulnerability is currently being developed by the Ministry of National Development Planning. The index consists of five general systems, covering water security, coastal stability, maritime safety, food security (rice) and community health (Dengue hemorrhagic fever case). In this case, the resilience to climate change project impact is measured by general indicators, such as the volume of infrastructure developed and the beneficiaries that benefit from the projects. The framework will be further updated for the next reporting.

SDGs Indicators

Indonesia is highly committed to the achievement of the Sustainable Development Goals. The Government has linked and integrated SDGs targets and indicators to the national mid-term development plan (RPJMN), which ensures the implementation of SDGs in the country. As mentioned in the previous section of the report, the Green Sukuk proceeds have contributed towards the achievement Goal 1 (No Poverty), Goal 2 (Zero Hunger) of Goal 3 (Good Health and Well-Being), Goal 5 (Gender Equality), Goal 6 (Clean Water and Sanitation for All), Goal 7 (Affordable and Clean Energy), Goal 8 (Decent Work and Economic Growth), Goal 9 (Industry, Innovation, and Infrastructure), Goal 10 (Reduced Inequalities), Goal 11 (Sustainable Cities and Communities), Goal 12 (Responsible Consumption and Production), Goal 13 (Climate Action), Goal 14 (Life Below Water), and Goal 15 (Life on Land).

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The Ministry of Finance of the Republic of Indonesia

Independent Limited Assurance Statement in relation to the Subject Matter included in the 2022 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia

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Independent Limited Assurance Statement in relation to the Subject Matter included in the 2022 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia

Report No. 00386/2.1032/JL.0/11/0692-3/1/VII/2023

To the Director General of Budget Financing and Risk Management, the Ministry of Finance of the Republic of Indonesia (the "Ministry")

Scope

We have been engaged by the Ministry to perform a 'limited assurance engagement,' as defined by Standards on Assurance Engagement (SAE) 3000 (Assurance Engagements Other than Audits or Reviews of Historical Financial Information) established by the Indonesian Institute of Certified Public Accountants (IICPA), here after referred to as the engagement, to report on the subject matters detailed below ("Subject Matter") as presented in the Ministry's 2022 Green Sukuk – Allocation and Impact Report (the "Green Sukuk Report") for the period from 6 June 2022 to 31 December 2022. The Subject Matter for our limited assurance engagement was limited to the information as follows:

- The process for project evaluation and selection based on the Republic of Indonesia SDGs Government Securities Framework (the "Framework")
- The allocation of proceeds to eligible SDG projects with green focus disclosed in the Green Sukuk Report

The allocation of proceeds is disclosed as amount committed to eligible SDG Projects with green focus in IDR and in USD in Table 1.1 – Financing Projects of the 2022 Global Green Sukuk Allocation and Table 1.2 – Refinancing Projects of the 2022 Global Green Sukuk Allocation of the Green Sukuk Report. The amount committed in Table 1.1 has been reported based on unaudited amounts extracted on 13 April 2023 for the limited assurance process, while the amount committed in Table 1.2 has been reported based on audited amounts by *Badan Pemeriksa Keuangan Republik Indonesia* (The Audit Board of the Republic of Indonesia) on 30 May 2022.

The Subject Matter did not include:

- Data sets, statements, information, systems or approaches other than the selected indicators/disclosures;
- Any other elements included in the Green Sukuk Report and any other green sukuk information published elsewhere in the Ministry's reports, website and other publications;
- Information prior to 6 June 2022 and subsequent to 31 December 2022

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria

In preparing the Subject Matter, the Ministry has applied the International Capital Market Association's Green Bond Principles, Social Bond Principles, and Sustainability Bond Guidelines and ASEAN Capital Markets Forum's Green Bond Standards, Social Bond Standards, and Sustainable Bond Standards on the Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting as set out in the Republic of Indonesia SDGs Government Securities Framework (the "Framework") for the selected Subject Matter in the Green Sukuk Report.

The Ministry's responsibility

The Ministry is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the Subject Matter, such that it is free from material misstatement, whether due to fraud or error.

Our responsibility

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the SAE 3000 (Assurance Engagements Other Than Audits or Reviews of Historical Financial Information) established by the IICPA, and the terms of reference for this engagement as agreed with the Ministry. Those standards require that we plan and perform our engagement to express a conclusion on whether anything has come to our attention that causes us to believe that the Subject Matter has not been reported and presented fairly, in all material respects, in accordance with the Criteria. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Our Independence and Quality Control

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Public Accountants established by the Indonesian Institute of Certified Public Accountants, and have the required competencies and experience to conduct this assurance engagement.

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Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information, and applying analytical and other appropriate procedures.

Our limited assurance procedures included:

- Conducting interviews with key personnel to understand the design and implementation of the process for project evaluation and selection based on the Framework
- Performing observation in the implementation of Republic of Indonesia's procedures on collecting, collating and reporting the allocation of proceeds to eligible SDG projects with green focus
- Comparing the amount of the green sukuk proceeds allocated to the eligible SDG projects with green focus to corresponding information in the relevant underlying sources, on a sample basis, to check the validity of the data
- Consider the disclosure of the Subject Matter in the Green Sukuk Report

Limitations on our scope of work

Our limited assurance procedures have not covered the following:

- Verification of the operating effectiveness of the project evaluation and selection process;
- Verification of the use of proceeds to eligible SDG projects with green focus nominated by each of the Line Ministries as the project owner;
- Verification of the tracking, monitoring, and reporting of the impacts of the eligible SDG projects with green focus from the Line Ministries to the Ministry; and
- Verification of the average project lifetime and impact of the implementation of the eligible SDG projects with green focus disclosed in the Green Sukuk Report

Independent Limited Assurance Statement in relation to the Subject Matter included in the 2022 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia (continued)

Report No. 00386/2.1032/JL.0/11/0692-3/1/VII/2023 (continued)

Conclusion

Based on the limited assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Subject Matter set out in Green Sukuk Report for the period from 6 June 2022 to 31 December 2022 has not been reported and presented fairly, in all material respects, in accordance with the Criteria.

Use of Our Limited Assurance Statement

We disclaim any assumption of responsibility for any reliance on this limited assurance statement, or on the Subject Matter to which it relates, to any persons other than the Ministry or for any purpose other than that for which it was prepared.

KAP Purwantono, Sungkoro & Surja

Deden Riyadi
Public Accountant Registration No. AP.0692

7 July 2023