

GREEN SUKUK

ALLOCATION AND IMPACT REPORT

May 2021



MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

Table of Contents

Forewords	4
Republic of Indonesia's Green Sukuk Milestone	5
Executive Summary	6
Introduction	10
Summary of the Republic of Indonesia Green Bond/Sukuk Framework	12
Featured Projects	14
Management of Dam, Lake, and Other Water Retention Facilities	14
Development and Management of Railway Transportation Infrastructure and Supporting Facilities	15
Expansion and Preservation of Agricultural Lands	16
List of Projects	17
Interpreting Reported Results	36
Annex: Impact Measurement Methodology and Indicators	37
Assurance Page	40

Foreword

The Minister of Finance of the Republic of Indonesia

Climate Change is the defining issue of our time, and we are at a defining moment. From shifting weather patterns to rising sea levels, the impacts of climate change are global in scope and unprecedented in scale.

The world is currently entering a real phase of climate change impact. A number of natural phenomena show the serious impact of global warming. As the world's largest archipelago - comprising over 17,000 islands, Indonesia is among the regions that are highly susceptible to climate change - threatening the sustainability of its natural ecosystems and resources, at which the national economy is heavily dependent on. The nation's vulnerability to climate change is thus not only limited to physical and environmental threats, but also its socio-economic conditions.

As part of strong commitment to combat the impact of climate change, Indonesia has ratified Paris Agreement in 2016. To reduce the drivers and impact of climate change, Indonesia has also set out an ambitious greenhouse gas emissions reduction target of 29 percent, independently, and up to 41 percent with international assistance in 2030. However, in achieving this ambitious target, a great challenge lies in the gap between: the needs and the availability of national financial resources; which is estimated to reach USD 247.2 billion or around IDR 3.461 trillion per year - indicating that the reliance on the national budget alone will not be sufficient. Leveraging untapped financial resources and innovative financing therefore becomes necessary to close the financing gap for climate actions, and to accelerate progress towards Sustainable Development Goals (SDGs).

The introduction of new financial instruments over the recent years and the potential that exists for their massive development thus could be a game changer. Successful stories are emerging from around the world, including from Indonesia.

Rapid development of the global green bond or green sukuk market offer an attractive financing vehicle for green project developers to raise long-term debt finance. In 2020, amidst market uncertainty due to the Covid-19 pandemic and fluctuating financial market dynamics, Indonesia has been successful in issuing Global Green Sukuk of USD750 million. It was the third issuance respectively since 2018 and focused to finance several sectors as shown in the Indonesia Green Bond/Green Sukuk Framework. Indonesia has been recognized as a leader in the sovereign green sukuk market. Indonesia has so far raised a total of USD 2.75 billion from the three global green sukuk issuances. Indonesia's green sukuk becomes an excellent example of the pioneering role of governments in leveraging private finance to accelerate progress towards green and sustainable development.

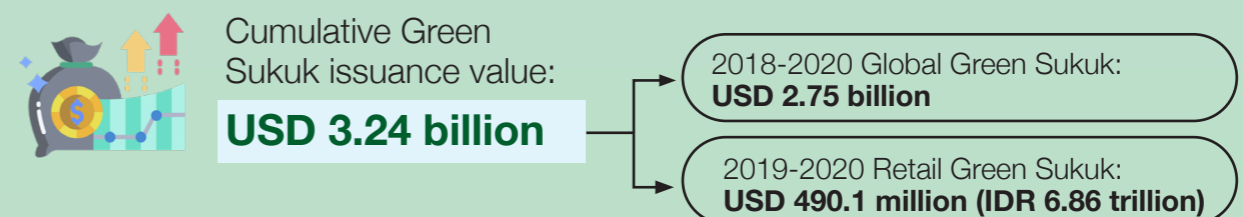
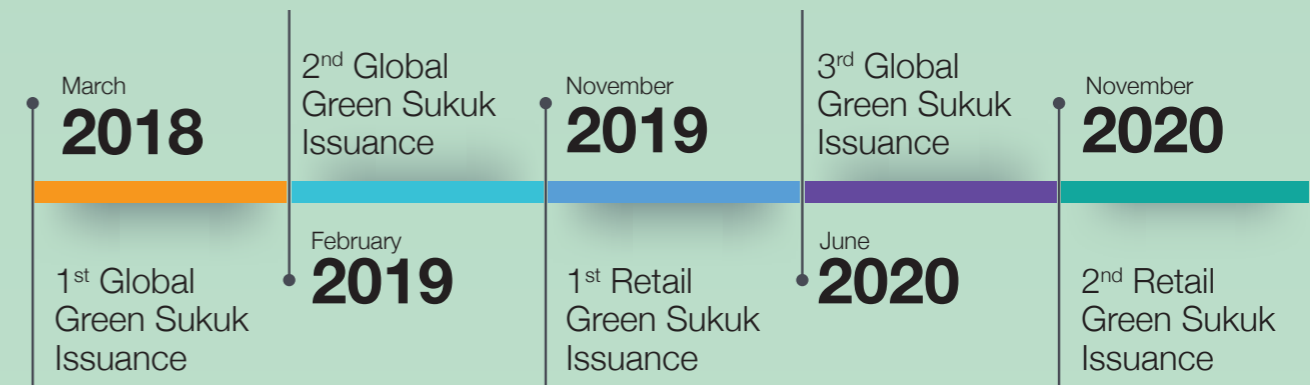
I am pleased to present the publication of this 3rd Green Sukuk Report as a form of government transparency and responsibility which allows the public to see that the green sukuk proceeds are indeed directed to the right investments and delivering on the country's climate response.

I would like to acknowledge all parties for their valuable support to the issuance of the green sukuk and to the completion of this report, including The National Development Planning Agency, The Ministry of Environment and Forestry, The Ministry of Transportation, The Ministry of Public Works and Settlement, The Ministry of Energy and Mineral Resources, United Nations Development Programme and the World Bank.



SRI MULYANI INDRAWATI

Republic of Indonesia's Green Sukuk Milestone

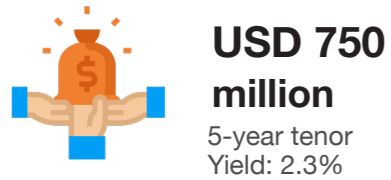


Awards

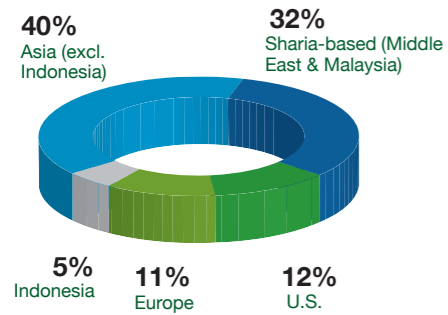


Executive Summary

2020 Global Green Sukuk



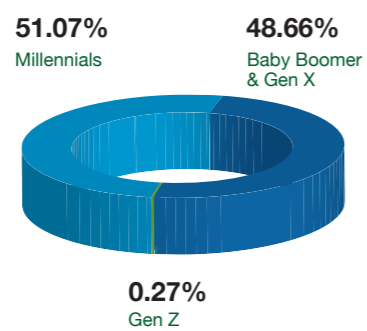
Distribution of Investors by Geographical Area



2019 Retail Green Sukuk (ST006)



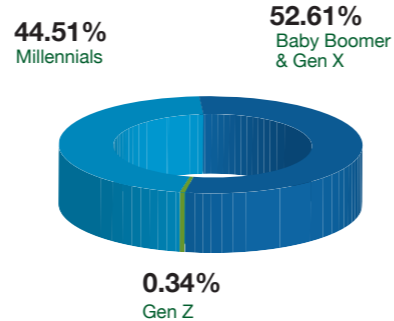
Distribution of Investors by Age Group



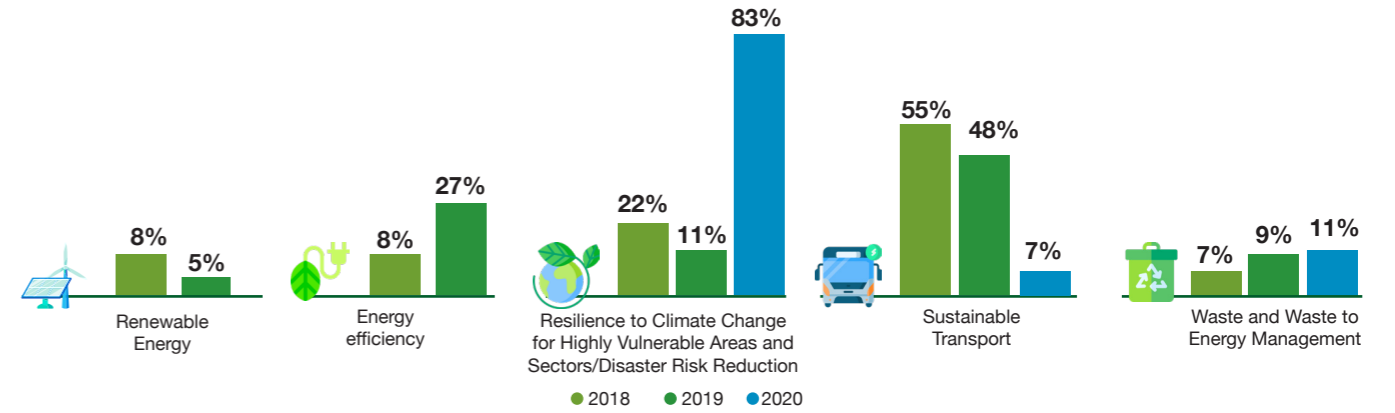
2020 Retail Green Sukuk (ST007)¹



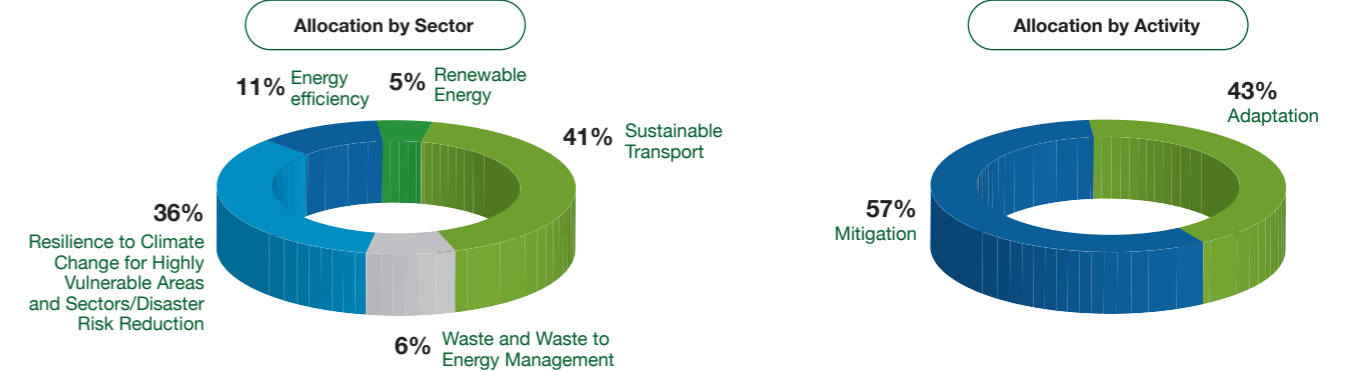
Distribution of Investors by Age Group



Global Green Sukuk Proceeds Allocation by Sector (in percentage)

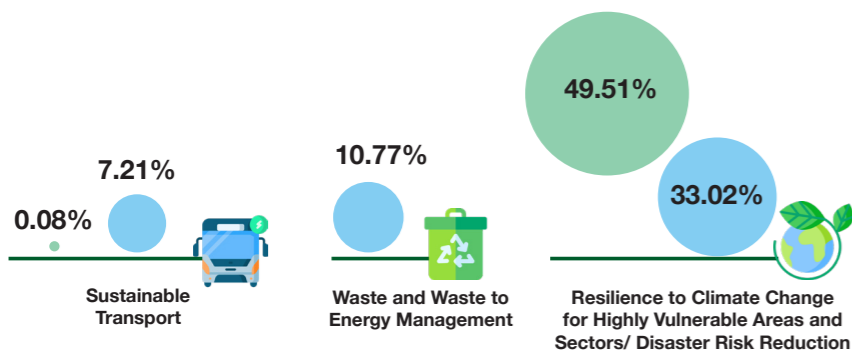


Cumulative 2018, 2019, and 2020 Global Green Sukuk Issuance



Use of Proceeds

2020 Global Green Sukuk Issuance



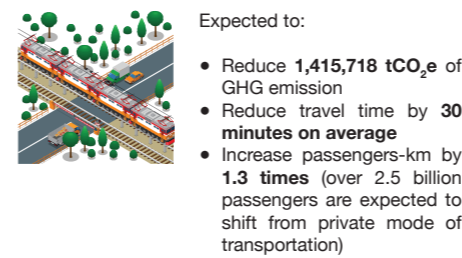
2019 Retail Green Sukuk



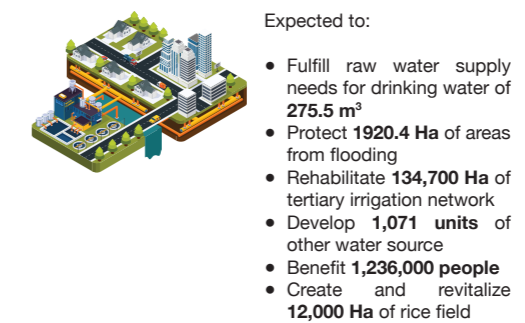
Projected Environmental and Social Impacts

For 2020 Global Green Sukuk

Sustainable Transport



Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction



Waste to Energy and Waste Management



¹ Information on the allocation and impact of ST-007 Retail Green Sukuk issuance proceeds will be included in the next report

Geographic Locations of 2019 Retail Green Sukuk and 2020 Global Green Sukuk Projects



Introduction

“ The impacts of climate change are right before us, particularly for archipelagic nations such as Indonesia. Increasing frequency of natural disasters including floods and droughts require people to stay alert. COVID-19 pandemic has further complicated these challenges... Therefore, we must take extraordinary steps.

President Joko Widodo's address at virtual 2021 Climate Adaptation Summit (CAS) on January 25, 2021 ”

Amidst the COVID-19 pandemic, the Government of Republic of Indonesia (GOI) continued to issue its third Global Sovereign Green Sukuk in June 2020. The issuance was oversubscribed by 7.37 times - attracting 33.74% of green investors, an increase from 29% on the 2018 and 2019 issuance, respectively. Prior to the global issuance, the GOI also issued the world's first retail green sukuk (ST-006 series) in November 2019 and its second (ST-007 series) in November 2020 - broadening the domestic investor base as well as tapping into the growing demand for green and sustainable investment within the country. The issuances of this innovative and sustainable financing instrument have shown the commitment and contribution of the GOI to mitigate and adapt to climate change impacts, whilst strengthening its position in the global sharia financial market.

In the last decades, with its population and economic growth, Indonesia has improved its development indicators. Indonesia's real GDP is projected to reach USD 5.16 trillion in 2030, placing the country among the five most powerful economies. However, a study conducted by the Fiscal Policy Agency in 2020² found that Indonesia will also experience a potential loss of IDR 110.37 trillion from climate change impacts, and up to IDR 4,328.38 trillion if added with ecosystem damage and related disasters.

According to Indonesia's 2nd Biennial Update Report to the UNFCCC (2018), financing the NDC target from 2018 to 2030 will require USD 247 billion (IDR 3,461 trillion). The sole reliance on public climate financing, however, would not be sufficient. By deploying the Climate Budget Tagging³, the Ministry of Finance has identified that the 2016-2020 public expenditure could only cover 34% of the total financing needs. As a response to this challenge, leveraging untapped financial resources and innovative financing become urgent to close the investment gap for climate actions and to accelerate progress towards Sustainable Development Goals (SDGs).

² Indonesia Green Growth Program (bappenas.go.id)

³ Climate Budget Tagging (CBT) is a tagging mechanism to identify and track down expenditures and outputs related to mitigation and adaptation activities in planning and budgeting documents of sectoral ministries. The CBT led by the Ministry of Finance, Ministry of National Development Planning (BAPPENAS), and Ministry of Environment and Forestry engaging the related sectoral ministries.

The GOI has acknowledged the potential adverse impacts of climate change and thus strengthened the national development policies and related institutions. One of which is through the establishment of the National Action Plan on Green House Gas (GHG) Emission Reduction and Adaptation (RAN-GRK and RAN-API, published in 2011 and 2014 respectively) as well as the 2015-2020 Indonesia Biodiversity Strategy and Action Plan (IBSAP). These documents comprise a set of targets, programmes, and projects related to climate mitigation and adaptation, as well as biodiversity conservation – which have also been mainstreamed in the 2015-2019 National Midterm Development Plan (RPJMN). Within the RPJMN, as part of the national efforts in adapting to the climate change impacts, climate change is positioned as one of the cross-sectoral issues, which is addressed within the enhancement of infrastructure and facilities, food security, ecosystem resilience and the supporting system, natural resources and environment, as well as health sectors. These policies, strategies, and targets have been improved and further mainstreamed in the current 2020-2024 RPJMN.

In line with the GOI's strategies and policies, most of the proceeds of the 2020 Global Green Sukuk issuance were directed towards financing the 2020 Fiscal Year and refinancing the 2018 Fiscal Year projects on Resilience to Climate Change for Highly Vulnerable Areas and Sectors/Disaster Risk Reduction, as one of the national priority programmes. This is also the case for the 2019 Retail Green Sukuk issuance, where a hundred percent of the proceeds were allocated for projects under this sector. The remaining proceeds from the global issuance were directed to support the upgrading of double track railway in the Southern Java line and improving waste management. This report covers detailed information on the allocation and impact from the Global Green Sukuk issuance in June 2020 and ST-006 Retail Green Sukuk issuance in November 2019, while the information on ST-007 Retail Green Sukuk will be included in the next reporting.

Summary of the Republic of Indonesia Green Bond/Sukuk Framework

Prior to the issuance of the Green Sukuk, the Republic of Indonesia published a Green Bond and Green Sukuk Framework which indicates the green sectors that are eligible to be financed and/ or refinanced by the Green Sukuk proceeds. The Framework was developed based on the Green Bond Principles (GBP), received a Second Party Opinion by CICERO, and was awarded Medium Green Shade.

Green Shading according to CICERO's second-party opinion



The Framework Excluded Use of Proceeds for



New Fossil Fuel-Based Electric Power



Large Scale Hydropower Plants > 30 MW



Nuclear Assets

Selection Procedure

The Framework indicates the project selection procedure utilizing 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 expenditures/ projects that contribute towards climate change mitigation and adaptation, in accordance with Indonesia's climate targets. The green projects funded by the Green Sukuk are selected from tagged projects that fall under one of the nine eligible green sectors under the Framework. The Green Sukuk proceeds are allocated to finance and/ or refinance eligible green projects. The Ministry of Finance selects projects that are consistent by timeline with the tenure of the Green Sukuk. The environmental and non-environmental impact of each project are assessed by the individual ministries together with the Ministry of National Development Planning (including the Secretariate of RAN-GRK and RAN-API), and are validated by the Ministry of Environment and Forestry to be consistent with RAN-GRK, 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).

Management of Proceeds

The 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 project are being held in cash in the government's general account at the Bank Indonesia (Central Bank of the Republic of Indonesia). The Ministry of Finance is committed to and has actively manage 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.

The respective line ministries/ agencies that utilize the proceeds monitor and report the environmental and non-environmental benefits of the eligible green projects within their portfolio to the Ministry of Finance.

Featured Projects



Location: Karas Island, Batam City, Riau Islands Province
Source: Ministry of Public Works and Housing

Management of Dam, Lake, and Other Water Retention Facilities

As a shared resource, water is essential for people's survival. It is a key to achieving poverty reduction, inclusive economic growth, public health, food security, and community's well-being. However, a study by the Ministry of Public Works and Housing (2016) found that Indonesia's existing raw water surface remains only at 2.78 trillion m³/year. Only less than a quarter, i.e. around 691.3 billion m³/year, could potentially be accessed; and of the potential resources, only 30% or circa 50 m³/capita/year have been utilized. The figure is significantly low when compared to Thailand, i.e. 1,277 m³/capita/year. The data indicates that the development and rehabilitation of water supply capacity facilities as well as irrigation networks, both to support the food security and to anticipate the increasing impact of climate change, should become a national priority.

The Government addressed this concern by emphasizing the need to integrate the aspect of climate change resilience within the planning, implementation, and reporting stages, as reflected in the 2020-2024 RPJMN - revising the previous nomenclature of "water resource management" into "water resource resilience". In this context, the government adopted a national strategy to tackle food security by ensuring sustainable water supply - meeting the national water needs while anticipating the water's potential destruction due to the increasing hydro-meteorological hazards.

Therefore, the 2020 Green Sukuk issuance financed the development of the water retention units, i.e. water retention basins (*embung*), dams, and lakes in 22 provinces across Indonesia. These projects provided solutions for the local community to access the groundwater. For instance, the people of Riau Islands Province were heavily dependent on smaller (both artificial and natural) rain-fed embung and lakes, while constantly exposed to the risk from water scarcity. To respond to the situation, the Ministry of Public Works and Public Housing leveraged the Green Sukuk financing to develop and supervise the water retention project located in Karas Island, Batam City of Riau Island Province. The City Government further built the water treatment facility, ensuring the sustainability of the water resources. The project is expected to provide *embung* storage capacity at 0.003 million m³. In addition to the increase in water storage capacity, the project also contributes towards the creation of hundreds of jobs – empowering the local economy.

Sector:



Resilience to Climate Change for Highly Vulnerable Areas



Location: Cipinang Locomotive Depot, East Jakarta, DKI Jakarta Province
Source: Ministry of Transportation

Sector:



Sustainable Transport



Development and Management of Railway Transport Infrastructure and Supporting Facilities

Having supported part of the Double-Double Track upgrade of North Line Java Railways Network connecting Jakarta–Surabaya, the 2020 Green Sukuk supported the financing of the double track line in South Line Java Railways Network upgrade. The multi-year project aims to upgrade from single to double track connecting Cirebon City in West Java Province to Jombang Regency in East Java Province - at which the remaining 65 km of line from Jombang Regency to Surabaya City in East Java Province are scheduled to be completed by 2022.

Current presidential administration has put national development priority to improve interregional connectivity to reduce the regional disparity. One of the priority programmes is the development and revitalisation of railway transport in Java, Sumatra, Kalimantan and Sulawesi. Java remains the major regional economic priority, from which the economic activity spill-over, in particular value chains of economic-based manufacturing to services, could affect different parts across Indonesia. The government continues to improve the railway transport to expect a shift from the usage of private modes of transportation (e.g. cars and motorcycles) to public railways transport - providing not only socio-economic but also climate benefits.

The upgrade of double-track lines becomes a significant part in the effort to improve the role and efficiency of the railroad mode in Java - minimizing the transport burden of road networks, which dominates the mobility of people and goods. The Greater Jakarta Commuter Line is expected to reduce GHG emission by 172,001 tCO₂e (2020), 557,522 tCO₂e (2019), and 564,345 tCO₂e (2018); while the South Java Double Track line (activated in 2020) is expected to reduce GHG emission by 121,850 tCO₂e, increase passenger-km by 1.3 times (or 2,547,965,852 passengers are expected to shift from bus/ private car/ motorcycle) and reduce travel time by 30 minutes on average compared to the existing road transport modes.



Condition: 0%



Condition: 50%



Condition: 75%



Condition: 100%

Sector:



Resilience to Climate Change for Highly Vulnerable Areas/Disaster Risk Reduction



Expansion and Preservation of Agricultural Lands

Potangoan Village of Buol Regency of Central Sulawesi was selected as one of the implementation sites for rice-field opening and revitalization project. The 18 hectares of rice-field area were managed by 'Karya Beramal' farmer group. According to the Vulnerability Index Data Information System (SIDIK) of the Ministry of Environment and Forestry, Buol Regency was categorized as one of the areas that is highly vulnerable to climate change impacts – which may threaten food security.

The Ministry of Agriculture promotes extensification and revitalization of rice fields at idle and existing lands, respectively. Following the land opening, the rice-fields were handed over to farmer groups with supporting facilitations from the extension officers assigned by the Ministry and related local government agencies. In the 2018 fiscal year, the project included the rehabilitation of existing tertiary irrigation networks as well as the exploration and conservation of water resources and their surrounding environment off the irrigation network. The project becomes one of the Ministry of Agriculture's programmes to realize farmer's welfare, by enhancing food security and agricultural production competitiveness.

During the 2015-2019 RPJMN period, the Ministry achieved 435,220 hectares of 1 million hectares target. Of which, the 2020 Green Sukuk issuance contributes to refinancing the 2018 fiscal year project totaling about 9,560 hectares of the 12,000-hectares target, with potential rice production at 66,970 tons. However, it is worth noting that the Green Sukuk's support avoided the extensification at peatland areas, such as those in the Central Kalimantan area.

In Indonesia's 2020-2024 RPJMN, the government expands the concept of food estate programme, which covers not only rice as a staple food, but also other horticulture products in anticipating the supply chain crisis resulted from public restriction due to COVID-19 pandemic, natural disaster, and climate change impacts.

List of Projects

This section includes list of projects funded by the Global Green Sukuk issuance in 2020 and Retail Green Sukuk issuance in 2019. Through this report, it is confirmed that there are no changes to the allocation of the aforementioned issuance. While the Government of Indonesia is making its best effort to collect and report material environmental and social impact, it is not feasible to collect or estimate impact metrics for several projects utilizing the financing of both issuances until closer to or at project completion.

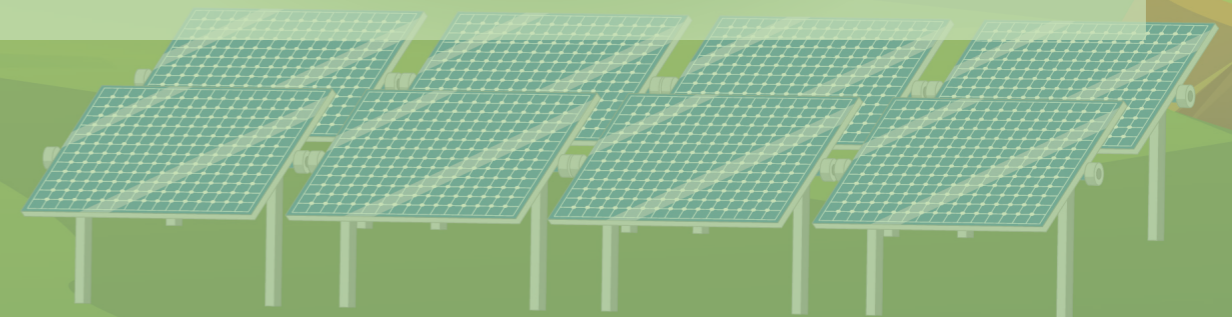


Table 1.1 – Financing Projects of the 2020 Global Green Sukuk Allocation
(This table includes projected impacts reported for the financing projects - 2020.⁴)

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 ₂ e)	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 m ³ 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 hydrometeorological 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
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) and 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

⁴ 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.

Table 1.2 – Refinancing Projects of the 2020 Global Green Sukuk Allocation

(This table includes projected impacts reported for the refinancing projects - 2018.⁵)

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 CO2e)	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 Agriculture	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 Island and DKI Jakarta	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 threatens the national food security and self-sufficiency programme. Ministry of Agriculture targetted 12,000 Ha of new and revitalised ricefields which were focused on area of rice production centre prone to drought in 22 provinces.	Aceh, West Sumatra, Jambi, South Sumatra, Lampung, Bengkulu, Riau Island, West Java, West Kalimantan, South Kalimantan, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, West Sulawesi, East Nusa Tenggara, Maluku, North Maluku, Papua, West Papua	174,808,438,544	12,139,475	-	N/A	12,000 Ha of new and revitalised ricefields	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 DI 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
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	-	-	tbc	-	Ministry of Public Works and Housing

⁵ 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.

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 CO2e)	Other results ^f	Social / SDGs ^g	
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	N/A	N/A	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 maintaining 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) and 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 Ministry of Public Works and Housing priorities to develop regional landfill for 3-4 cities, 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. Denotes limited assurance from EY on the amount committed to green projects. 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 1.3 – Financing Projects of the 2019 Retail Green Sukuk Allocation

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 CO2e)	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 1.4. Financing Projects of the 2019 Global Green Sukuk Allocation
(This table includes projected impacts reported for financing projects-2019.⁶)

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 ₂ e)	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	3-10 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	206,470 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
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	917,103 tonnes	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, DI 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

⁶ 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.

Table 1.5 Refinancing Projects of the 2019 Global Green Sukuk Allocation
(This table includes projected impacts reported for refinancing projects - 2017⁷)

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 ₂ e) [*]	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	3-20 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
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.	DKI 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.	DKI Jakarta, West Java, Central Java, DI 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 Transportation	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 Transportation	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

⁷ Refinancing Projects of the 2019 Global Green Sukuk are projects implemented in 2017. Per 31 December 2019, the total amount allocated to refinancing 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

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 ₂ e) [*]	Other results ^f	Social / SDGs ^g	
8	Sustainable Transportation	Developing Clean Transportation Systems	Development of Greater Jakarta Urban Train	Construction of double-double track of the Greater Jakarta urban railway network.	Greater Jakarta (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

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 1.6 Financing Projects of the 2018 Global Green Sukuk Allocation
(This table includes projected impacts reported for financing projects - 2018⁸)

No	Sector	Type of Project ^a	Project Name	Brief Description ^b	Location	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 ₂ e) ^e	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

⁸ 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

No	Sector	Type of Project ^a	Project Name	Brief Description ^b	Location	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 ₂ e) ^e	Other results ^f	Social / SDGs ^g	
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
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	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, controlling 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	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 (Jakarta, Bogor, Depok, Tangerang, Bekasi)	4,541,992,313,000	302,799,488	10 years	169,003.9 tonnes	tbc	tbc	Ministry of Transportation

Table 1.7 Refinancing Projects of the 2018 Global Green Sukuk Allocation
(This table includes projected impacts reported for refinancing projects - 2016)

No	Sector	Type of Project ^a	Project Name	Brief Description ^b	Location	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 ₂ e)	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 Mini-hydro 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. Mini-hydro 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 m ³ with biogas production of 36 m ³ / 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 Kalimantan, South Kalimantan, East Kalimantan, North Kalimantan, North Sulawesi, South Sulawesi, South East Sulawesi, Maluku, Bali, East Nusa Tenggara, Papua, West Papua, DKI 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

No	Sector	Type of Project ^a	Project Name	Brief Description ^b	Location	Amount Committed (in IDR) ^c	Amount Committed (in USD) ^c	Average Project Lifetime ^d	Impacts ^e			Project Owners
									Mitigation (Annual GHG Emission Avoided, in CO2e)	Other results ^f	Social/SDGs ^g	
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 Greater Jakarta Urban Train	Improvement of passengers facilities through power supply capacity raising, land acquisition, construction of underpasses, flyovers, and pedestrian bridges of the Greater Jakarta urban railway network.	Greater Jakarta (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 DKI 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.	DI Yogyakarta and East Java	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.	DKI 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	1,126,841,051,045	75,122,737	10 years	tbc	1,457,428 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.	West Java	113,979,203,856	7,598,614	10 years	tbc	110,000 number households received the benefit	7, 11, 13	Ministry of Public Works and Housing

Notes:

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

Interpreting Reported Results

2020 Republic of Indonesia Green Sukuk Allocation and Impact Report is developed to allow investors in compassing the details of eligible green projects, which are in line with Indonesia's Green Bond and Green Sukuk Framework, as well as the relevant impacts for both mitigation and adaptation projects. Several key results 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:

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.

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.

Comparability

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

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).

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.

Source of Data

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

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 utilized 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 Green Bond and Green Sukuk 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 2020 Global Green Sukuk are allocated to refinance the government's 2018 Fiscal Year and to finance the 2020 Fiscal Year green projects - whilst the proceeds from the 2019 Retail Green Sukuk are allocated to finance the government's 2019 Fiscal Year green projects. 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 realization, 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 (2018), the data reported are based on audited numbers by BPK (Supreme Audit Agency) as per 31 May 2019 for accountability purposes. However, for the 2020 projects, data reported are the amount allocated and committed as of 31 December 2020, which later will be audited by 31 May 2021. To that end, the 2020 project data will be updated in the next reporting. This year's report has also included the 2019 retail green sukuk allocation and impact data that was yet to be included in the last year's report.

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 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 factors.

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*)	28.6 (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 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 (RJPMN), which ensure 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), and Goal 13 (Climate Action).

Independent Limited Assurance Statement in relation to the subject matters included in the 2020 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia

Report No. 00214/2.1032/JL.0/11/0692-1/1/V/2021

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

We have carried out a limited assurance engagement in order to state whether anything has come to our attention that causes us to believe that the subject matter detailed below ("Subject Matter"), and as presented in the 2020 Green Sukuk - Allocation and Impact Report (the "Green Sukuk Report") for the period from 23 June 2020 to 31 December 2020 has not been reported and presented fairly, in all material respects, in accordance with the criteria ("Criteria") below.

Subject Matter

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 Green Bond and Green Sukuk Framework ("Framework")
- The allocation of proceeds to eligible green projects disclosed in the Green Sukuk Report for the period from 23 June 2020 to 31 December 2020

The allocation of proceeds is disclosed as amount committed to eligible green projects in IDR and in USD in Table 1.1 - Financing Projects of the 2020 Global Green Sukuk Allocation and Table 1.2 - Refinancing Projects of the 2020 Global Green Sukuk Allocation of the Green Sukuk Report. The amount committed in Table 1.1 have been reported based on unaudited values extracted on 4 February 2021 for the limited assurance process.

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 23 June 2020 and subsequent to 31 December 2020.

Independent Limited Assurance Statement in relation to the subject matters included in the 2020 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia

Report No. 00214/2.1032/JL.0/11/0692-1/1/V/2021 (continued)

Criteria

As the basis for the assurance engagement, the Ministry has applied the International Capital Market Association Green Bond Principles on the Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting as set out in the Republic of Indonesia Green Bond and Green Sukuk Framework (the "Framework") for the selected Subject Matter in the Green Sukuk Report.

The Ministry's responsibility

The Ministry is responsible for developing the Framework. The Ministry is responsible for the preparation and fair presentation of the Subject Matter in the Green Sukuk Report in accordance with the Criteria as set out in the Framework. The Ministry is responsible for establishing and maintaining internal controls relevant to the preparation and presentation of the Subject Matter that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate criteria; maintaining adequate records and making estimates that are reasonable in the circumstances, and ensuring that the process for project evaluation and selection complies with the Framework.

Assurance Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Subject Matter in accordance with the 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) and the terms of reference for this engagement as agreed with the Company.

Our procedures were designed to obtain a limited level of assurance on which to base our conclusion, and, as such, do not provide all of the evidence that would be required to provide a reasonable level of assurance. The procedures performed depend on the assurance practitioner's judgement including the risk of material misstatement of the Subject Matter, whether due to fraud or error. While 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. We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.



Independent Limited Assurance Statement in relation to the subject matters included in the 2020 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia

Report No. 00214/2.1032/JL.0/11/0692-1/1/V/2021 (continued)

Summary of Procedures Undertaken

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 Republic of Indonesia Green Bond and Green Sukuk Framework
- Performing observation in the implementation of Republic of Indonesia's procedures on collecting, collating and reporting the allocation of proceeds to eligible green projects
- Comparing the amount of the green sukuk proceeds allocated to the eligible green projects 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

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 the nominated projects by each of the Line Ministries owning the Eligible Green Projects;
- Verification of the tracking, monitoring, and reporting of the environmental impacts of the Eligible Green Projects from the Line Ministries to the Ministry of Finance;
- Verification of the average project lifetime and impact from the implementation of the Eligible Green Projects disclosed in the Green Sukuk Report

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.

Our Independence

In conducting our assurance engagement, we have met the independence requirements within the meaning of the Code of Ethics for Public Accountants established by the Indonesian Institute of Certified Public Accountants.



Independent Limited Assurance Statement in relation to the subject matters included in the 2020 Green Sukuk - Allocation and Impact Report of the Ministry of Finance of the Republic of Indonesia

Report No. 00214/2.1032/JL.0/11/0692-1/1/V/2021 (continued)

Conclusion

Based on the limited assurance procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Subject Matter set out in the Green Sukuk Report for the period from 23 June 2020 to 31 December 2020, has not been reported and presented fairly, in all material respects, in accordance with the Criteria.

Purwantono, Sungkoro & Surja

Deden Riyadi, CSRA
Public Accountant Registration No. AP0692

11 May 2021



MINISTRY OF FINANCE
REPUBLIC OF INDONESIA

Published by Ministry of Finance, Republic of Indonesia

Contact us:

Directorate General of Budget Financing and Risk Management

(62 - 21) 3516296

www.djppr.kemenkeu.go.id

webmaster.djppr@kemenkeu.go.id