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بالتعاون مع فرقة البحث الجامعي PRFU  
الموسومة بعنوان : رهانات الاقتصاد الأخضر في الجزائر وتأثيره على تحقيق التنمية المستدامة

# **Green Financing through Green Sukuk in the Fight Against Climate Change: Lessons from Indonesia**

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# AGENDA

- 
1. Introduction
  2. Green sukuk in fight against climate change
  3. Green sukuk in financing various programs and projects
  4. Proposed green sukuk financing model
  5. Conclusion



# INTRODUCTION

# MAP OF THE WORLD



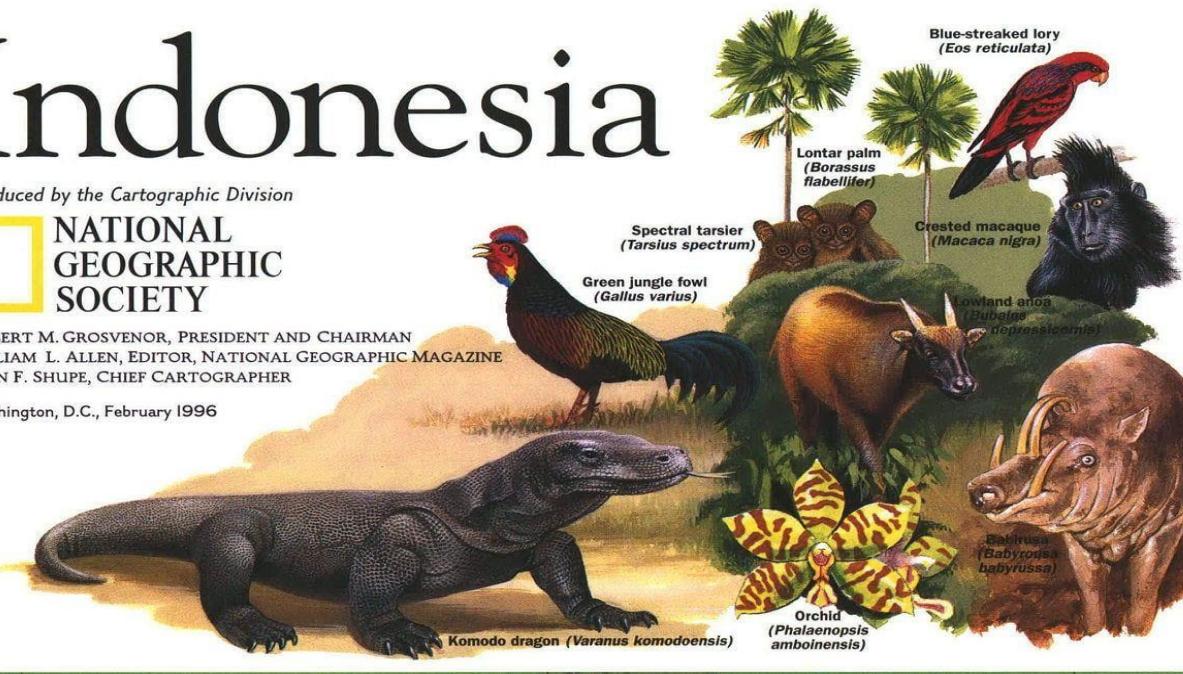
- ~ 270.2 million of people (September 2020)
- ~ 17,508 island
- ~ 300 ethnics
- ~ 580 languages & dialects

# Indonesia

Produced by the Cartographic Division  
NATIONAL GEOGRAPHIC SOCIETY

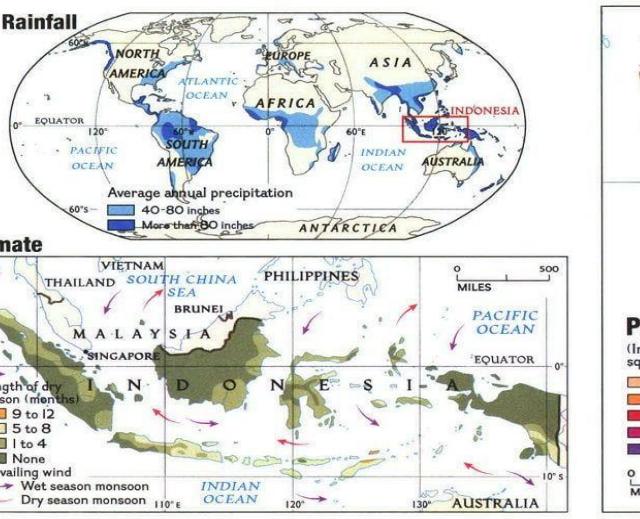
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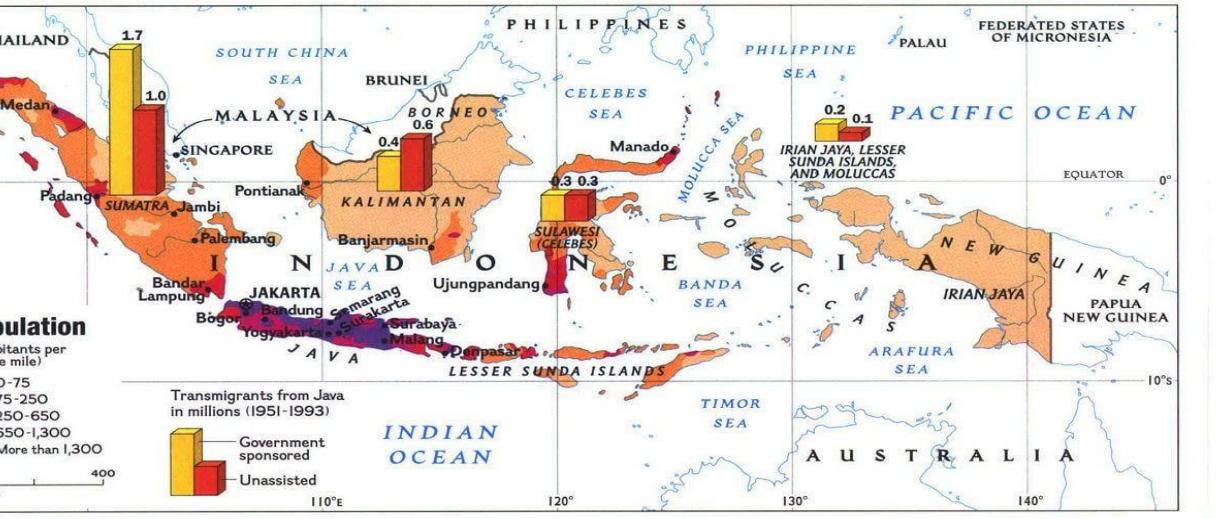
**S**pread across 3,000 miles of the Indian and Pacific Oceans, Indonesia is the largest archipelago nation in the world. Once known as the Dutch East Indies, this collection of 17,000 islands—3,000 of them inhabited—declared its independence from the Netherlands in 1945. Straddling the Equator and drenched in rain, Indonesia is a treasure house of natural diversity. Its vast stretches of rain forest, the largest outside Amazonia, contain perhaps the richest and most unusual collection of plants and animals on earth.

A tropical crossroads between mainland Asia and Australia, Indonesia teems with wildlife from both realms, from elephants to tree kangaroos. Some animals are found nowhere else, like the giant Komodo dragon, the Javan rhinoceros, and seven species of birds of paradise. Altogether some 430 of Indonesia's 1,500 bird species and 200 of its 500 mammals as well as hundreds of reptiles and amphibians are unique to the archipelago. Decades of logging and slash-and-burn farming imperil Indonesia's natural heritage. An ambitious conservation plan aims to preserve it.



## Monsoon Rhythms

Indonesia receives its heaviest rains from December through March, when monsoons blow from mainland Asia, gathering moisture over the Indian Ocean and the South China Sea. A "dry"—or less wet—season arrives in June with winds from Australia.

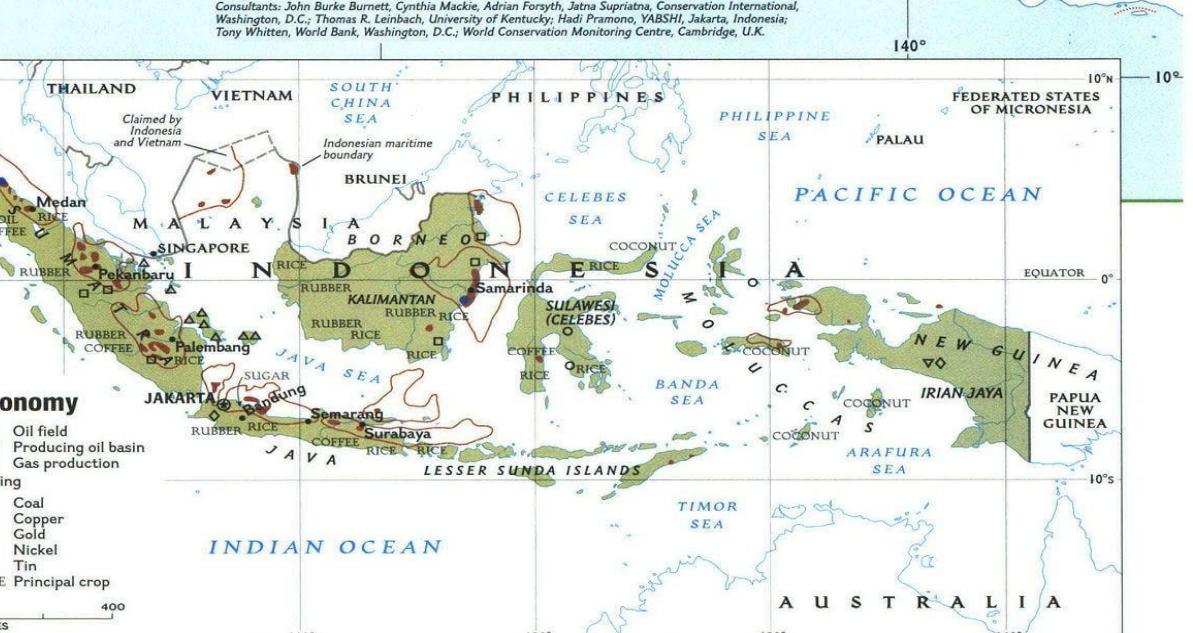
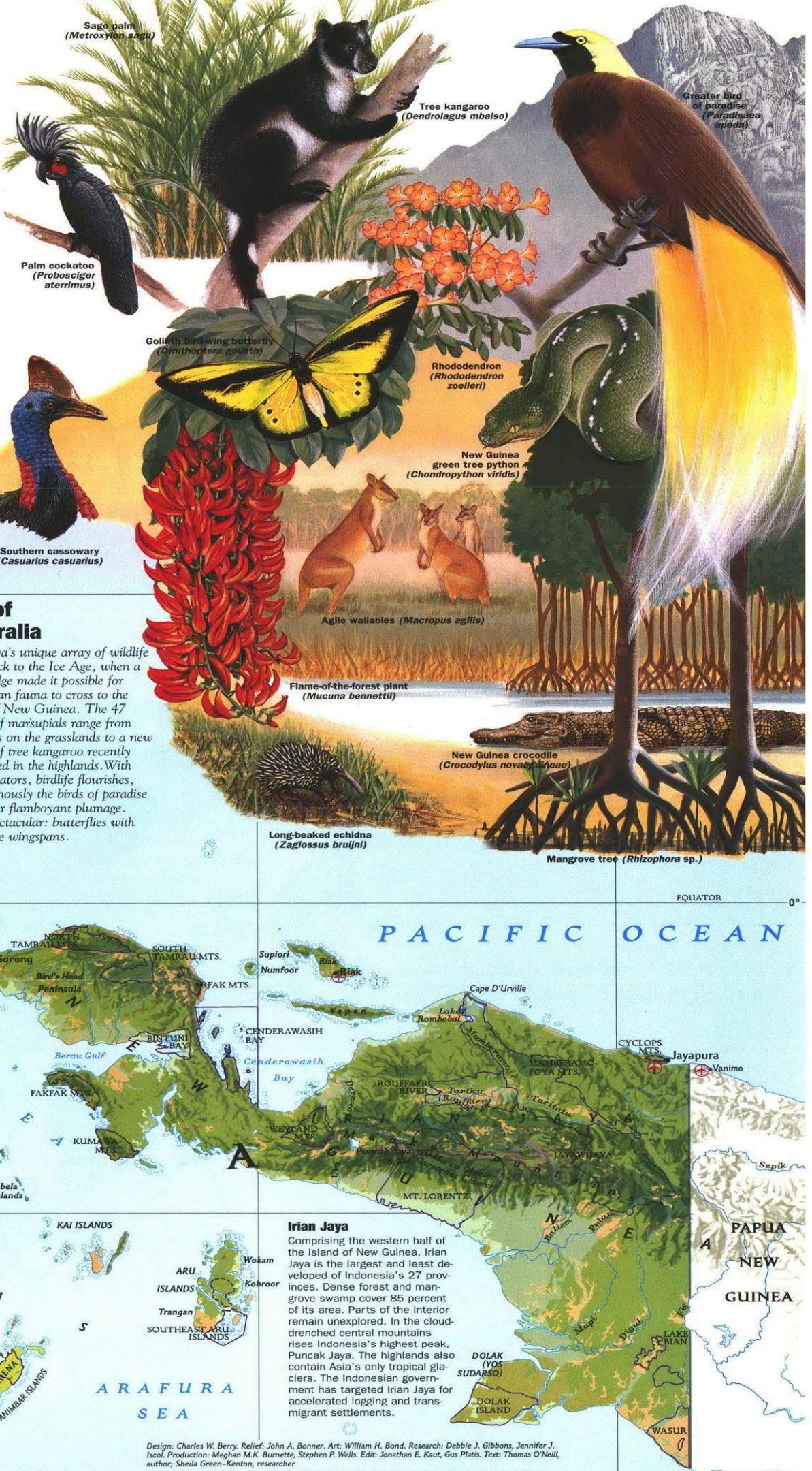


## Dispersing the Crowds

The world's fourth most populous nation, with 200 million people, Indonesia faces a chronic problem of uneven population distribution. More than 60

percent of its people are crammed onto Java. To spread development to the outer islands, the government sponsors a huge transmigration program.

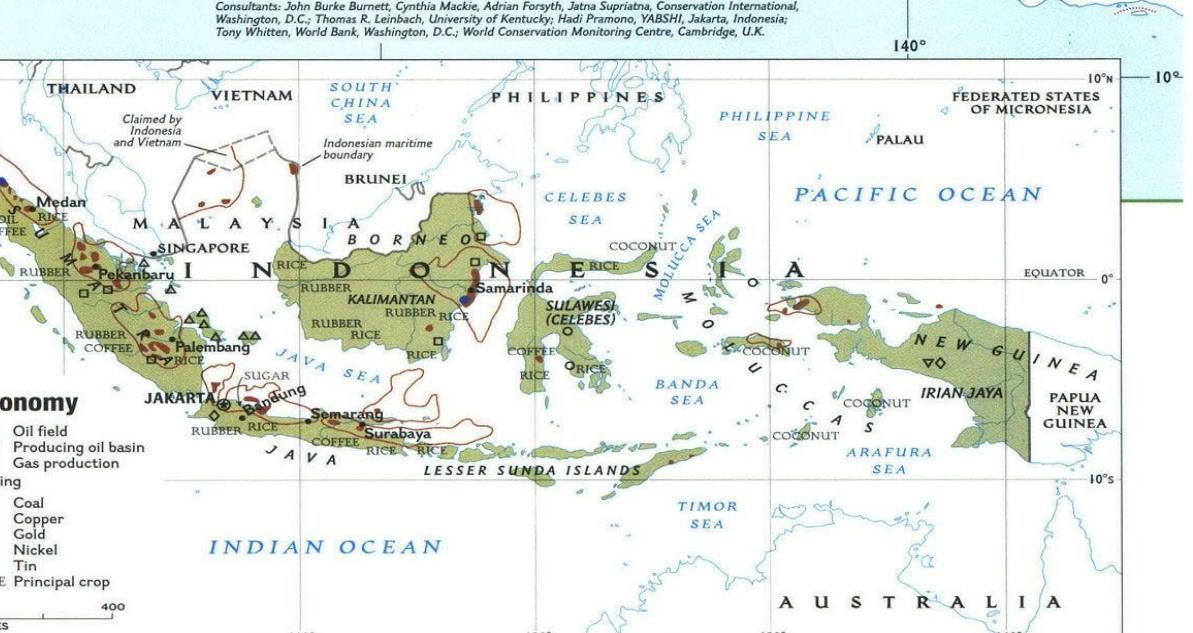
Unassisted migration accounts for at least two million additional people. Poor land sites and conflicts with local populations continue to plague the program.



## Forest Survivors

Room still exists—just barely—for many large Asian mammals on Indonesia's western islands. The endangered orangutan swings through reetops in Sumatra and Kalimantan. Unlike its East African cousins, the Asian elephant keeps to dense forests, joined by the tiger and rhinoceros. The Asian fauna is rich in cats and primates.

Among the most important animals culturally and the high-flying hornbills, which figure in many tribal myths in Kalimantan. Plant life includes the world's largest flower, Rafflesia arnoldii, with a blossom three feet wide.



~ 10% of the world's tropical forests  
~ 36% of the world's tropical peatlands  
~ The thermohaline circulation (THC)



# **GREEN SUKUK IN FIGHT AGAINST CLIMATE CHANGE**

# Indonesia's Green Sukuk Framework

## 1. Use of proceeds of Green Sukuk

Eligible green projects must require into one of the nine eligible sectors.

## 2. Project Evaluation and Selection

Observation and acceptance process by MoF and Ministry of National Development Planning/National Development Planning Agency (Bappenas)

## 3. Proceeds Management- MoF

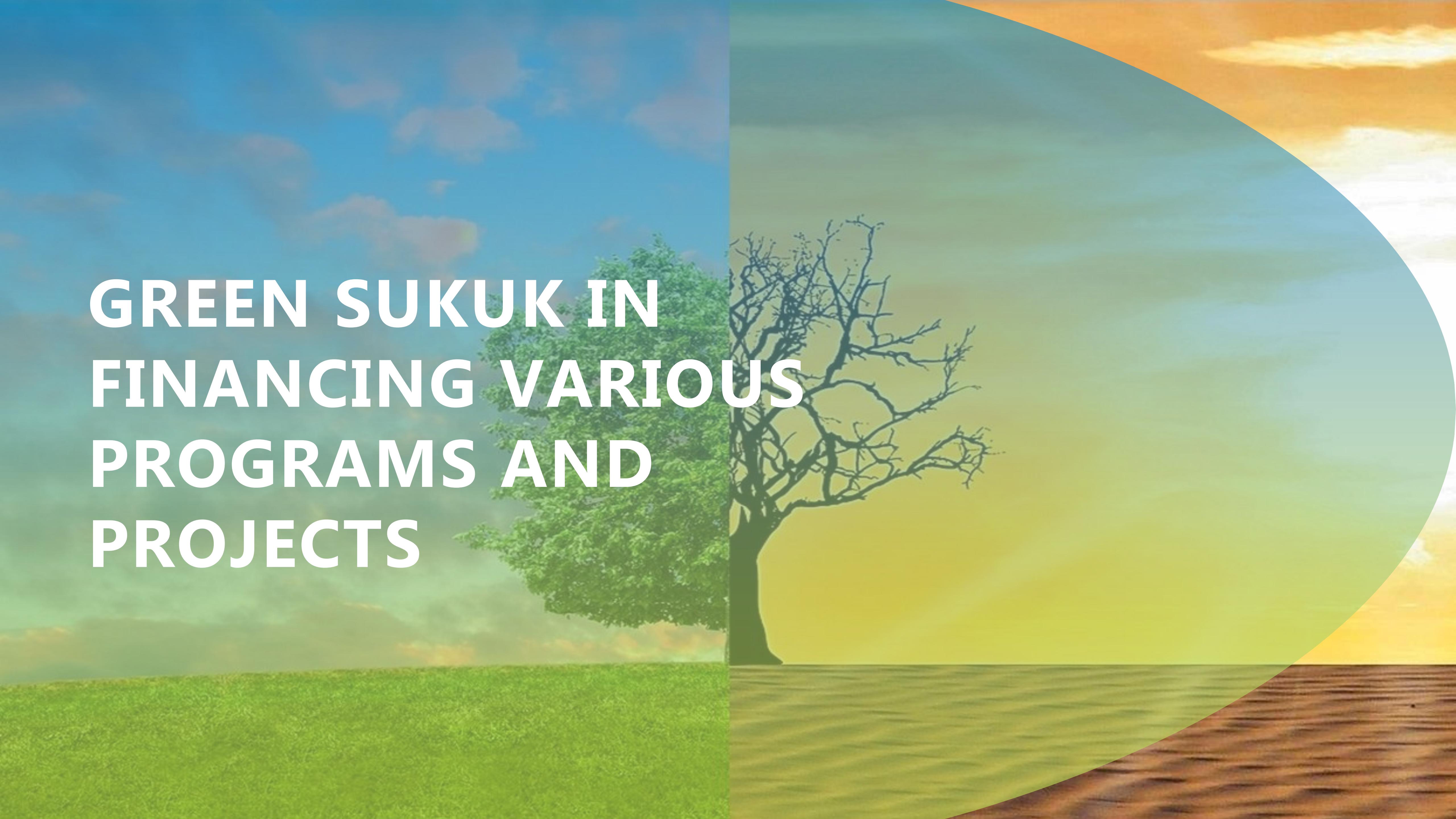
The Green Sukuk funds will be collected to a designated account of relevant ministries for financing specific projects as previously assigned. Distribution is administered by MoF.

**Line Ministries**  
The range ministries employing the funds must trace, observe, and declare to MoF about the environmental merits of the Eligible Green Sectors.

## 4. Reporting

MoF will organize and issue a Green Sukuk annual report on the list of projects, amounts of funds served to such project/program and calculation of worthwhile impacts.

# **GREEN SUKUK IN FINANCING VARIOUS PROGRAMS AND PROJECTS**



# The Summary of Indonesia's Sovereign Green Sukuk

Year	2018	2019		2020	
Instrument	Global Green Sukuk	Global Green Sukuk	Retail Green Sukuk	Global Green Sukuk	Retail Green Sukuk
Total Amount	USD1.25 billion (~IDR16,750 billion)	USD0.754 billion (~IDR11,250 billion)	IDR1,459.88 billion  ~IDR12,707.88 billion	USD0.750 billion	IDR5,421.26 billion
Total/ Origin of Investors	32% to Islamic, Malaysia, and Middle East investors, 10% to Indonesia, 25% to Asia , 18% to US, and 15% to Europe.	29% to Islamic, Malaysia, and Middle East investors, 23% to US, 22% to Europe.	7,735 Investors	32% to Islamic and Middle East investors, 5% to Indonesia, 40% to Asia , 12% to US, and 11% to Europe.	16.992 Investors
Tenor	5 Years	5.5 Years	2 Years	5 Years	2 Years

Source: Musari (2021b)

Refinancing Project		Financing Project		
Sector	Projects' Name	Brief Description	Projects' Name	Brief Description
<b>Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction</b>	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.	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.
	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 ricefileds which were focused on area of rice production centre prone to drought in 22 provinces.	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.

Source: MoF (2021)

Refinancing Project		Financing Project		
Sector	Projects' Name	Brief Description	Projects' Name	Brief Description
<b>Resilience to Climate Change for Highly Vulnerable Areas and Sectors/ Disaster Risk Reduction</b>	Supervision and Development of Drinking Water Supply System	<p>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.</p> <p>The project to cover pipeline and non pipeline network development, improving the standardised drinking water quality, and reducing the water losses.</p>	Management of Dam, Lake, and Other Water Retention Facilities	<p>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.</p>
	Supervision and Development of Settlement Areas	<p>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.</p>	Development and Rehabilitation of Water Surface Irrigation Network	<p>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 &amp; rehabilitation of water irrigation infrastructure &amp; service, management system, and strengthening the operation &amp; management capacity of the institutions &amp; human resources.</p>

Source: MoF (2021)

Refinancing Project			Financing Project	
Sector	Projects' Name	Brief Description	Projects' Name	Brief Description
Sustainable Transport	Construction and Management of Railways Infrastructure and Supporting Facilities	<p>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.</p> <p>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.</p>	Development and Management of Railway Transportation Infrastructure and Supporting Facilities	<p>The project aims at improving public accessibility and safety &amp; security as an alternative shifting to already heavyburden road with private vehicles in order to enhance interregional connectivity. The project include development and maintenance of parts of Greater Jakarta Commuter Line and Southern Java Double Track railways and supporting facilities.</p>

Source: MoF (2021)

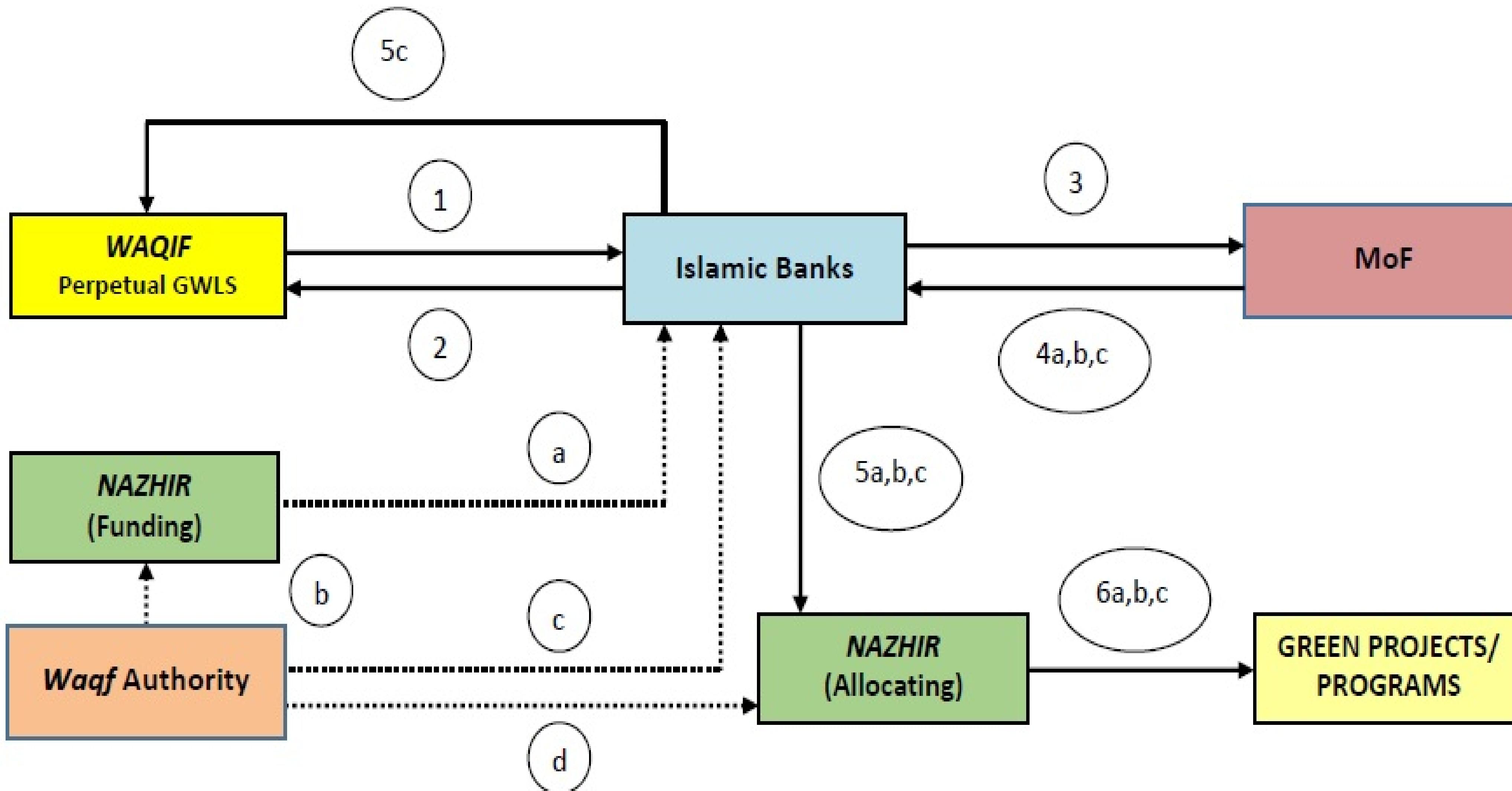
Refinancing Project		Financing Project		
Sector	Projects' Name	Brief Description	Projects' Name	Brief Description
Waste to Energy and Waste Management	Supervision and Development of Settlement Sanitation	While municipal solid waste management focuses to reduce number of waste disposed to landfill by 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.		

Source: MoF (2021)

A landscape photograph showing a vast, dry, and cracked earth field. In the background, there is a single, leafless tree standing alone. The sky above is a clear, pale blue with some wispy clouds. The overall scene conveys a sense of environmental concern or the impact of climate change.

# PROPOSED GREEN SUKUK FINANCING MODEL

# Perpetual Green *Waqf* Linked Sukuk



# CONCLUSION





Fight against climate change → national priorities → policy transformation, enabling environment, and financial investment → national agenda.

Green Sukuk in Indonesia → sustainable financing → Islamic green financing.

Green sukuk and CWLS → early model → Perpetual Green Waqf linked Sukuk as alternative to be Islamic green financing.



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