



**MINISTRY OF FINANCE** THAILAND

**Public Debt Management Office**



**SUSTAINABILITY BOND  
ANNUAL REPORT**

**2022**



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# Foreword by Minister of Finance

Under Thailand's 20-year National Strategy (2018 - 2037), The Royal Thai Government (RTG) is determined to achieve its sustainable development in all respects with regarding to the United Nations Sustainable Development Goals (UNSDGs) as well as global warming agenda. Recently, Thailand has committed to international community to achieve the net zero emissions by 2065 based on preferable circumstances at the 27th United Nations Framework Convention on Climate Change Conference of the Parties (COP27). As such, the Bio-Circular-Green (BCG) economy model has been put into action to transform the nation towards a value-based and innovation-driven economy while maintaining environmental sustainability. The BCG gives weight to three main driving industries: i) medical and vaccination ii) agricultural and iii) innovation.



During the Asia-Pacific Economic Cooperation (APEC) Meeting 2022 in Bangkok on 18th - 19th November, Thailand, as the Chairman of APEC 2022, proposed a so-called "Bangkok Goals on BCG Economy", which was endorsed by all member economies. The Bangkok Goals is a comprehensive framework to enhance APEC sustainability objectives. As a holistic and integrated approach to develop environmental friendly economy, the framework aims to achieve 4 sustainable areas, namely, i) climate action including net zero greenhouse gas emission, ii) sustainable trade and investment, iii) sustainable management of natural resource and conservation of the environment and biodiversity, and iv) resource efficiency and sustainable waste management.

Based on the above commitments, the Ministry of Finance has not only provided direct funding to related projects/initiatives but also played a pivotal role in promoting green financing infrastructure to ensure environmental-protection projects financing needs be fulfilled. On the one hand, we have provided financial support to some key projects including medical and healthcare related projects, big data center for modern agriculture management, and reduction of tax barriers for manufacturing plant of Bio-polyethylene. On the others, we have been strengthening our sustainable finance programs especially the promotion of domestic green, social, sustainability, sustainability-linked (GSSS) bond market to prepare for future financing needs. Although several issuances of sustainability bond have been issued including new underlying projects, we realize that more work have to be done to facilitate a wider utilization of green financing. In this regard, Ministry of Finance stands ready to work with all stakeholders to bolster the growth of GSSS bond market especially among private sector players. We hope that the deepening of our green financing infrastructure will greatly contribute to Thailand's ambition to achieve its climate change and social development goals.



## Message from Director General of Public Debt Management Office

Public Debt Management Office (PDMO) has a key role to play in supporting the Royal Thai Government (RTG)'s efforts in working towards achieving the United Nations Sustainable Development Goals (UNSDGs) as well as the commitment made under the Paris Agreement to limit the rise of the temperature. Since 2022, the PDMO has joined hands with some of the State-Owned Enterprises (SOEs) in issuing green, social, sustainability, sustainability-linked (GSSS) bonds to mobilize more funds into addressing climate change and social issues. We have made significant progress in promoting the expansion of the GSSS bond market, however, all stakeholders need to continue to strengthen our cooperation to ensure sustainable growth of this market.

With regards to the sustainability bond issued by the RTG, the total outstanding size of the 1st series with 15-year tenor has reached THB 212 billion with sufficient liquidity. That is why in the last quarter of fiscal year 2022, PDMO issued the 2nd series with the same features, receiving even stronger demand from both local and international investors. We also noticed that during financial market volatilities, the auction results for the sustainability bond was strong throughout, an indication of strong growth of the GSSS bond market. In terms of the underlying projects, we expanded to include sustainable water and waste water management, which is to support the Improvement and development of water resource for consumption and agriculture project". We also continue to adhere strictly to the requirements under the framework and all standards, by regularly publishing the sustainability bond report.

Looking forward the PDMO is committed to continuously develop sustainable finance as well as the GSSS bond market. We will continue our sustainability bond issuance program to further advance the green and social investment. In addition, we will provide support in anyway we can to the SOEs and private sector that are interested in starting their GSSS financing program journey.

PDMO would like to express our appreciation to all the parties involved, including investors, financial institutions, relevant government agencies and international agencies for their work and strong support in the development of Thailand's sustainable finance and GSSS market. We hope that together, we can contribute to a greener, sustainable and inclusive world for all.

## Thailand's Sustainability Principle

The National Strategy on Eco-Friendly Development and Growth aims to achieve all development aspects of the Sustainable Development Goals (SDGs), including society, economy, environment, good governance, and cooperation partnerships at both national and international levels. Strategic and operational plans formulation and implementation will be area-based, with the promotion of all related sectors' direct involvement to the extent possible.

Implementation will target the promotion of mutual growth in terms of the economy, environment, and quality of life. Also, the impacts of climate change have been anticipated to intensify regarding variability, frequency, and coverage. Such impacts will inevitably threaten lives, damage properties, and necessary infrastructure, and affect agricultural production and water security. At the same time, ecological systems are likely to deteriorate.

In accordance with the SDGs and the Paris Agreement, Thailand submitted to the UNFCCC long term development strategies to reduce greenhouse gas emissions with the goal of achieving carbon neutrality by 2065. In addition, Thai government pledged to achieve net-zero carbon emission by 2065 at the UN Climate Change Conference (COP26) in Glasgow. Moreover, these relevant international development frameworks will be embraced more seriously. As such, Thailand must be prepared to enhance its standards and compliance with international protocols.

Source:

<http://hscr.nesdb.go.th/wp-content/uploads/2019/10/National-Strategy-Eng-Final-25-OCT-2019.pdf>

[https://www.nesdc.go.th/ewt\\_dl\\_link.php?nid=9640](https://www.nesdc.go.th/ewt_dl_link.php?nid=9640)

[https://climate.onep.go.th/wp-content/uploads/2019/07/CCMP\\_english.pdf](https://climate.onep.go.th/wp-content/uploads/2019/07/CCMP_english.pdf)



## Bio-Circular-Green Economic Model (BCG model)

Thai government has introduced Bio-Circular-Green Economic Model (BCG model) as a new economic model for the national development and post-pandemic recovery strategy with an objective of transforming Thailand into a value-based and innovation-driven economy. The BCG model consists with the UN Sustainable Development Goals (SDGs) and the Sufficiency Economy Philosophy (SEP), which is the key principle of Thailand's social and economic development. Capitalizing on Thailand's strengths in biological diversity and cultural richness, the BCG model aims to promote four industries, namely i) agriculture and food ii) wellness and medicine, iii) energy, materials and biochemicals, and iv) tourism and creative economy. Science, technology and innovation will be employed to enhance capacity of all members in the value chain while supportive legal and financial measures will be provided to boost competitiveness of the four industries.

Furthermore, the BCG model was introduced as a guideline for sustainable development that aims to improve quality of life, distribute opportunities, and reduce inequality and used as a sustainability agenda in the Asia-Pacific Economic Cooperation 2022 Forum (APEC 2022). The Bangkok Goals, which based on the BCG model and consisted of i) climate action including net zero greenhouse gas emission, ii) sustainable trade and investment, iii) sustainable management of natural resource and conservation of the environment and biodiversity, and iv) resource efficiency and sustainable waste management, have been proposed and accepted by the APEC member countries in pursuing inclusive and sustainable growth and creating engagement across sectors – people, private, and public, among APEC economy and cross-region economy.



# Sustainable Financing Framework

## The Kingdom of Thailand's Sustainable Financing Framework

The Kingdom of Thailand (“KOT”) has developed the Kingdom of Thailand Sustainable Financing Framework (the “Framework”) under which it intends to issue Green, Social, and Sustainability financing instruments in order to support its sustainability commitments, including the Paris Agreement and the United Nations Sustainable Development Goals. According to these commitments, Thailand is committed to address climate change and combat with poverty, inequality, environmental degradation, health, and justice by 2030.

The projects financed under the Sustainable Financing Framework target climate change mitigation and adaptation, sustainable use and protection of water resources, protection and restoration of biodiversity and ecosystems, as well as fostering social development, socioeconomic advancement, and empowerment to ensure positive social contribution and to fight against inequality in Thailand.

### The Framework covers the following core elements in line with the standards:

- Use of Proceeds
- Project Evaluation and Selection
- Management of Proceeds
- Reporting
- External Review

An amount equal to the net proceeds of Green, Social or Sustainability financing instruments, issued by the KOT under this Framework, will be exclusively used to finance and/or refinance, in whole or in part, expenditures directly related to eligible Green and/or Social projects (“Eligible Green and Social Projects”) in the Eligible Green and Social Categories. Eligible Green and Social Projects can include government loans or expenditures in the form of direct investment expenditures, subsidies, fiscal measures and selected operational expenditures (including funding for state agencies, local authorities and companies instrumental to deploying the Thailand’s sustainability strategy). The Eligible Green and Social Projects are limited to Government Budget in the two budget years preceding the issuance, the budget year of issuance, and future budget years.

# Summary of Sustainability Bond

## Fiscal Year 2022 Summary of the Sustainability Bond

Thai government has launched sustainability bond, the first of its kind in ASEAN, to encourage economic growth that is sustainable, inclusive, and environmentally friendly. The proceed from the sustainability bond has been used to support environmental and social projects, including Covid-19 relief package and MRT orange east line project, in order to alleviate inequality and poverty in the society as well as mitigate climate change conforming to the United Nation Sustainable Development Goals and the Paris Agreement, respectively.

The first KOT's sustainability bond issuance in August 2020 was highly successful with exceptionally strong demand from both local and foreign investors. To date, PDMO has still continued to pursue regular bond issuance program to build on the success and to ensure that sufficient supply has been provided to invest in environmental and social projects.

In this year, The Ministry of Finance, Thailand has issued the new series of sustainability bond which is ESGLB376A to proceed in further green project category under the Framework. To support in water resources development and management for consumption and agriculture project for farming area outside the irrigated area.

## Summary of KOT Sustainability Bond Issuances

Sustainability Bond Series (ThaiBMA Symbol)	Initial Issuance Date	Maturity Date	Coupon	Amount Issued / Outstanding	Percentage of Allocation (Green / Social)
ESGLB35DA	19 - 20-Aug-2020	17-Dec-35	1.585%	THB 212 billion	Green: 18.9% / Social: 81.1%
ESGLB376A	19-Sep-22	17-Jun-37	3.390%	THB 35 billion	Green: 4.3% / Social: 95.7%

## Development of ESG Bond in Private Sector

Most investors in Thailand recognize the important of addressing climate change and social issues. The first green bond in Thailand was issued by TMB Bank in June 2018. After that, the SEC has launched an issuance and offer for sale guidelines for green bond in December 2018 and also issued the guidelines for social bond and sustainability bond in May 2019. Many companies have adopted the guidelines and participated in issuing ESG Bond.

Due to the COVID-19 pandemic since 2020, ESG bond markets in Thailand grow dramatically. In 2021, The SEC launched the guidelines of Sustainability-Link Bond (SLB) and in term of milestone, the first SLB in Thailand was issued by Thai Union Group. For This fiscal year, the total amount of SLB has already reached 32,000 THB million, issued by BTS Group Holdings, Indorama Ventures and Thai Union Group Public Company Limited.

The number of private companies issuing bond in the ESG market has increased from 3 companies in 2018 to 23 companies in 2022. Amount of ESG bond issuance, including public and private sectors, has grown from 16,200 THB million in 2019 to reach 149,245 THB million in 2022. It shows that the domestic ESG Bond Market has been growing rapidly.

## Allocation and Impact Report

### Overview of sustainability bond report

All proceeds from the sustainability bonds issued as at September 2022 have been fully allocated against a selection of eligible projects and assets as detailed below.

The COVID-19 rehabilitation package has been implemented and completed. The Mass Rail Transit Orange Line (East) has finished its constructions at 98%, which is expected to finish all constructions in 2022. The rolling stock will be arranged afterwards and the project is expected to start operating in 2025. Furthermore, the bond recently adds the Improvement and development of water resource for consumption and agriculture as a new eligible green project

# Allocation and Impact Report

## Overview of sustainability bond report

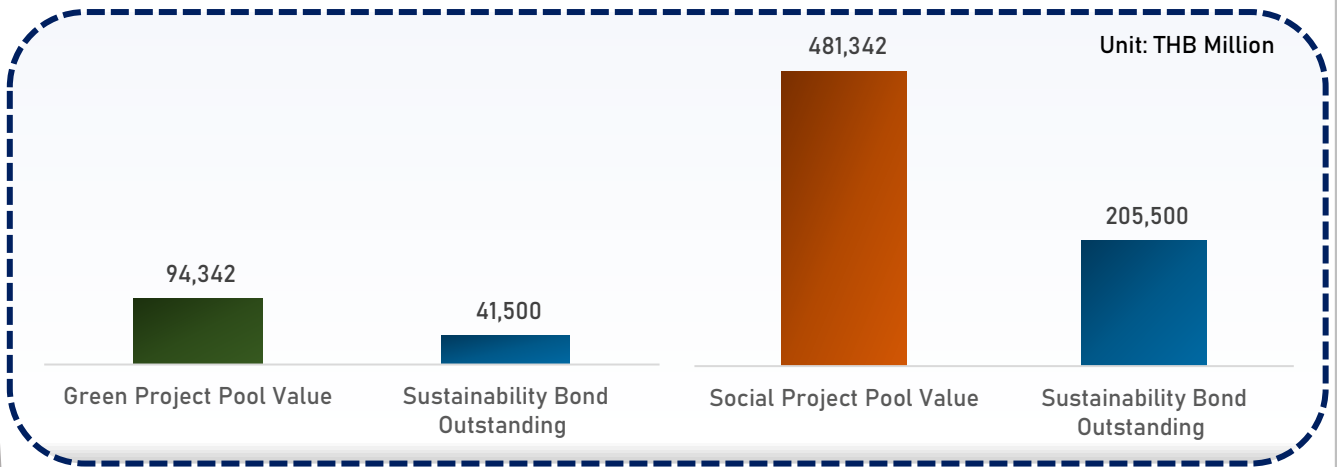
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Categories	Categories of eligible projects/assets	Projects	Amount Allocated (ESGLB35DA)	Amount Allocated (ESGLB376A)	Percent allocated by Sustainability Bond (%)	Allocated Outstanding (THB Mil.)	Project Value (THB Mil.)	Percent Disbursement	Progress to date / Outcome
Green	Clean transportation	Mass Rail Transit Orange Line (East)	40,000	-	16.19%	40,000	92,532	100%	Overall Construction Progress of the as end of September 2022 about 98%
	Sustainable water and wastewater management	Improvement and development of water resource for consumption and agriculture	-	1,500	0.61%	1,500	1,810	100%	# Water storage capacity (million m <sup>3</sup> ): 23.43% # Beneficial household (houses): 45.24% # Agricultural area (rai): 57.92%
Social	Employment generation (COVID-19 Financing)	COVID-19 Rehabilitation Packages:	117,000	-	47.37%	117,000	159,019	100%	A total of 15.27 million people directly benefited from the project.
		Rao Mai Ting Kan							
		Rao Cha Na	55,000	18,500	29.76%	73,500	273,482	100%	A total of 33.20 million people directly benefited from the project.
		Rao Rak Kan	-	15,000	6.07%	15,000	48,841	100%	A total of 8.10 million people directly benefited from the project.
<b>Total</b>			<b>212,000</b>	<b>35,000</b>	<b>100%</b>	<b>247,000</b>	<b>575,685</b>	<b>100%</b>	

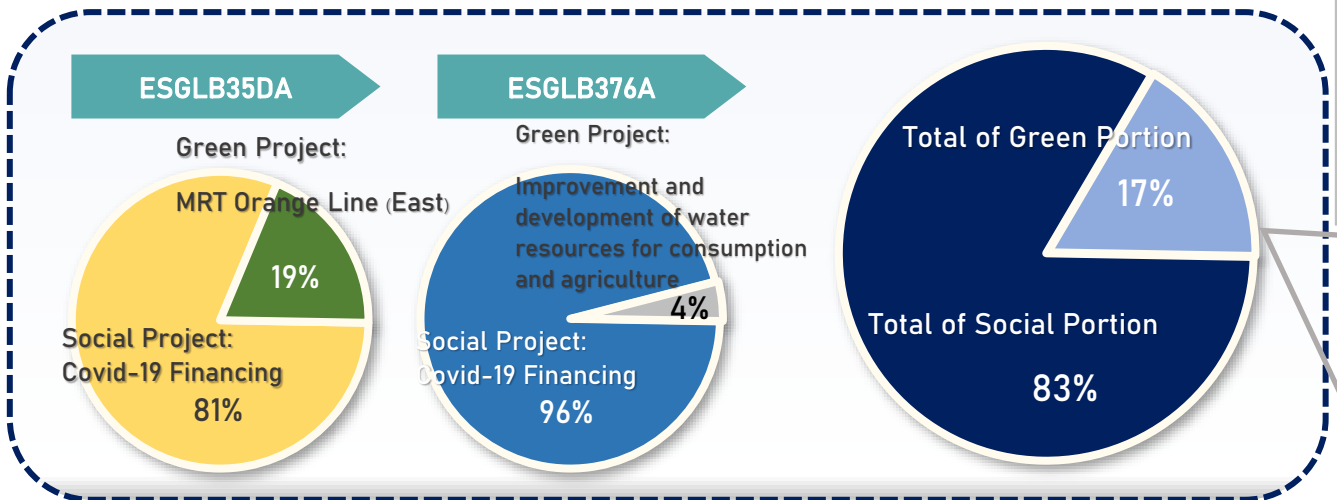
# Summary of Sustainability Bond

## Asset Pool Report in Green and Social Project



The assets financed by our sustainability bonds are divided into green and social pool categories. The green project pool value is the total expenditure of the MRT Orange East Line, while the social project pool value comes from the total budget for Rao Mai Ting Kan, Rao Cha Na, and Rao Rak Kan's financial aid packages approved by the cabinet.

## Green and Social Proportion for Sustainability Bond



To date, the allocated proportion on both Sustainability Bond series proceeding in eligible projects for clean transportation and sustainable water and wastewater management categories about 17% which are green and employment generation category about 83% which is social.

# Allocation Report

## Green Projects

Project	Ministry	Project Value (THB Mil.)	Allocated Outstanding (THB Mil.)	Percent Disbursement	Finance: Refinance Percentage	Project Description	Progress to Date / Outcome
Mass Rail Transit Orange Line (East)	Ministry of Transportation	92,532	40,000	100%	0: 100%	Refinancing the capital expenditures of Mass Rail Transit (MRT) Orange Line (East) project, a mass rapid transit line (for electric train) between Thailand Cultural Centre and Min buri (Suwintawong)	In progress (Overall Construction Progress of the MRT Orange Line as of end of September 2022 about 98%)
Improvement and development of water resource for consumption and agriculture	Ministry of Natural Resources and Environment	1,810	1,500	100%	0: 100%	Refinancing the loan project to support in water resource development and management for consumption and agriculture outside the irrigated area	In progress (Overall progress of managing water as of end of September 2022 about 55%)
<b>Total</b>		<b>41,810</b>	<b>41,500</b>	<b>100%</b>			

\*The project was slightly delayed due to flooding in other provinces.

## Social Projects

Project	Ministry	Project Value (THB Mil.)	Allocated Outstanding (THB Mil.)	Percent Disbursement	Finance: Refinance Percentage	Project Description	Progress to Date / Outcome
Rao Mai Ting Kan	Ministry of Finance	159,019	117,000	100%	0: 100%	Financing and/or refinancing the expenditures for COVID-19 Rehabilitation Package: the financial aid of 5,000 baht a month for 3 months are for those affected by the coronavirus outbreak	Completed
Rao Cha Na	Ministry of Finance	273,482	73,500	100%	0: 100%	Financing and/or refinancing the expenditures for COVID-19 Rehabilitation Package: the government provided 9,000 THB for 4 months to remedy low-income people affected by the pandemic	Completed
Rao Rak Kan	Ministry of Labour	48,841	15,000	100%	0: 100%	Financing and/or refinancing the expenditures for COVID-19 Rehabilitation Package: the government provided the financial aid of 6,000 baht for 4 months to assist employees covered by Section 33 of the Social Security Act (SSA)	Completed
<b>Total</b>		<b>481,342</b>	<b>205,500</b>	<b>100%</b>			

# Impact Report

## MASS RAPID TRANSIT ORANGE LINE [EAST]

Project Value	92,532 THB Mil.
Allocated Outstanding	40,000 THB Mil.
Percent of Eligibility for sustainability bonds	16.19%
Project lifetime	Expected to complete in 2022 and officially service in 2025
Expected benefit	<ul style="list-style-type: none"><li>• Reduced and/or avoided GHG emissions (in t.CO<sub>2</sub>e/year)</li><li>• Ridership: Number people using public transport</li></ul>

## Improvement and development of water resource for consumption and agriculture

Project Value	1,810 THB Mil.
Allocated Outstanding	1,500 THB Mil.
Percent of Eligibility for sustainability bonds	0.61%
Project lifetime	1 Year 5 months
Expected benefit	<ul style="list-style-type: none"><li>• Number of water source improvement outside the irrigated area</li><li>• Quantity of water storage (Mil. m<sup>3</sup>)</li><li>• Number of beneficial people and/or household from the project</li></ul>

## Rao Mai Ting Kan

Project Value	159,019 THB Mil.
Allocated Outstanding	117,000 THB Mil.
Percent of Eligibility for sustainability bonds	47.37%
Project lifetime	6 months
Expected benefit	A total of 15.27 million people directly benefited from 16 million people or 95.44%

## Rao Cha Na

Project Value	273,483 THB Mil.
Allocated Outstanding	73,500 THB Mil.
Percent of Eligibility for sustainability bonds	29.76%
Project lifetime	5 months
Expected benefit	A total of 33.20 million people directly benefited from 33.50 million people or 99.10%

## Rao Rak Kan

Project Value	48,841 THB Mil.
Allocated Outstanding	15,000 THB Mil.
Percent of Eligibility for sustainability bonds	6.07%
Project lifetime	8 months
Expected benefit	A total of 8.10 million people directly benefited from 8.14 million people or 99.51%

## MASS RAPID TRANSIT ORANGE LINE [EAST]:

The proceeds from the offering of the Bonds will be used for the purpose of liability management in respect of its debts which have previously been incurred for on-lending to the Mass Rapid Transit Authority (MRTA) in connection with MRT Orange Line (East) Project, a mass rapid transit line (for electric trains) between Thailand Cultural Centre and Min Buri (Suwinthawong), also such project will reduce air pollution and fuel consumption, together it would improve the traffic in urban area.

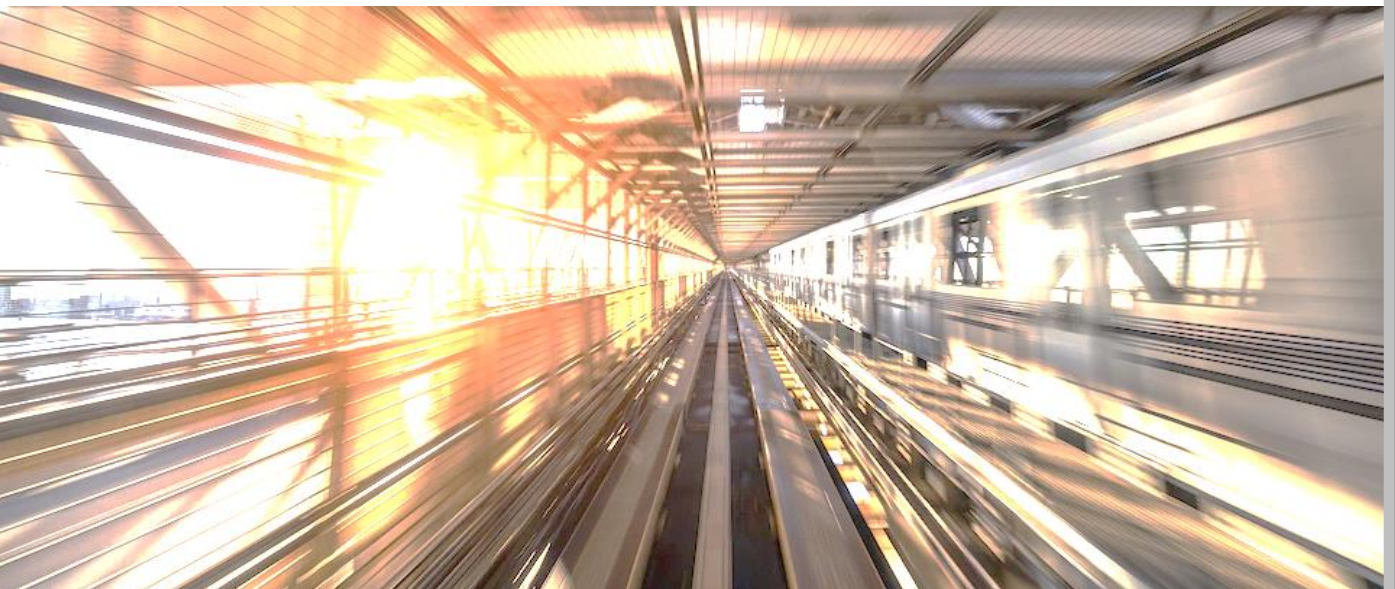
We submitted the bonds, and proceeds of which will be used for the purposes of the MRT Orange Line (East) Project, for verification and certification by the Climate Bonds Initiative (CBI) under Climate Bonds Standard. The Project has met the criteria for certification by CBI as a green project under “Low Carbon Transport – Electrified Rail” category as per to the CBS version 3.0

The Bonds have eligibility features to qualify as “Green Bonds” which fall within the Kingdom of Thailand’s Sustainable Financing Framework in clean transportation category.

## IMPROVEMENT AND DEVELOPMENT OF WATER RESOURCE FOR CONSUMPTION AND AGRICULTURE PROJECT:

The proceeds from the Sustainability Bonds are used to refinance in capital expenditure of the water resource development and management for consumption and agriculture which support in water reservoirs’ infrastructures to improve people well-being in 37 provinces outside the irrigated area. Also, support the farming system and to create added value for agricultural products by focusing on product quality development.

The Bonds have eligibility features to qualify as “Green Bonds” which fall within the Kingdom of Thailand’s Sustainable Financing Framework in sustainable water and wastewater management category.



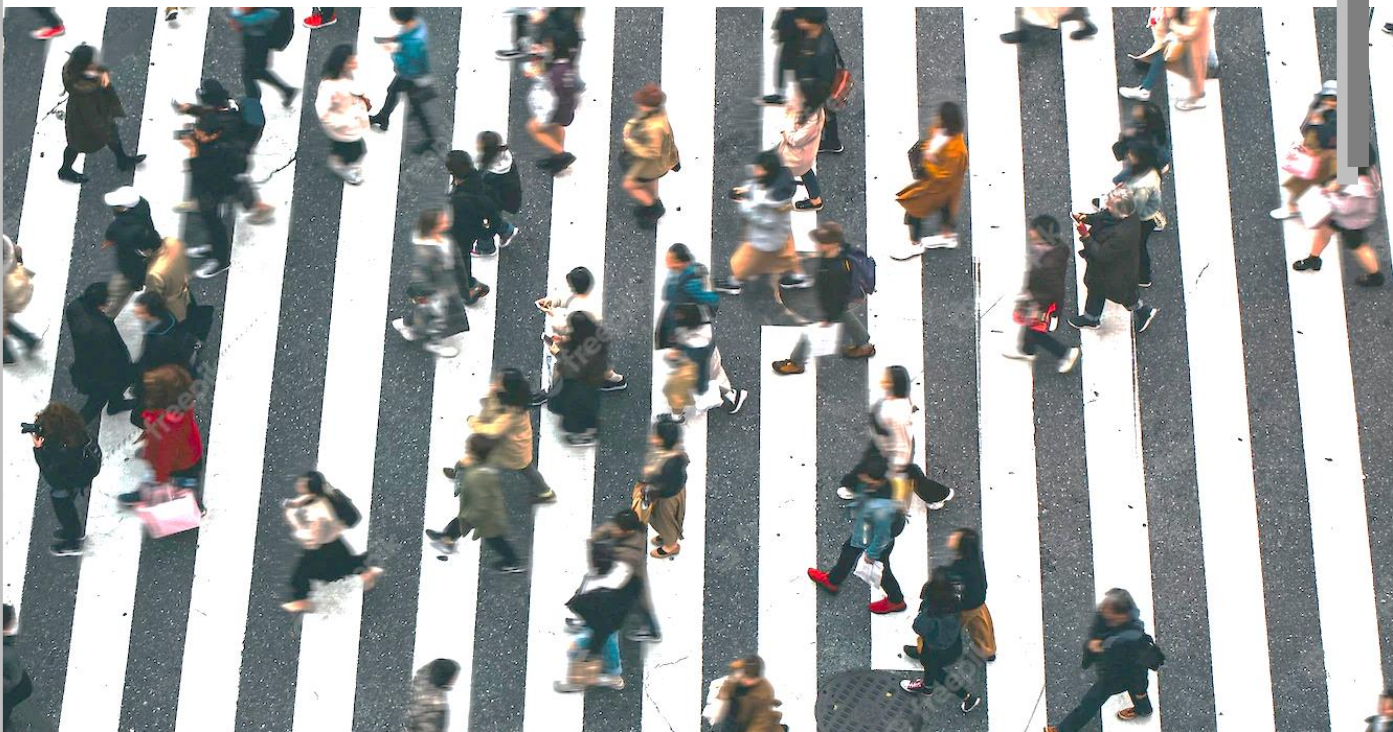
## COVID-19 RELATED PROJECTS UNDER THE SPECIALLY ENACTED COVID-19:

The proceeds from the Sustainability Bonds are used to finance the COVID-19 relief package that compensate and recover people who were affected by the Coronavirus disease (“COVID-19”) pandemic, which contributes to an improvement of society and the standard of living of the people of Thailand.

The financial aid was aiming at self-employed people, freelancers, farmers, individuals who are not covered by social security, and a socially vulnerable group. To date, more than 30 million people from all over the country were benefited from the COVID-19 relief package.

The sustainability Bonds (COVID-19) have social features that also fall within the Kingdom of Thailand’s Sustainable Financing Framework under the employment generation eligibility. In 2020, Thailand launched the first COVID-19 related project ‘Rao Mai Ting Kan’, followed by ‘Rao Cha Na’ and ‘Rao Rak Kan’. These projects are progress by cashed handout to SME and people who affected by the pandemic while driving Thailand economic growth.

The Bonds have eligibility features to qualify as “Social Bonds” which fall within the Kingdom of Thailand’s Sustainable Financing Framework in employment generation (Covid-19) category.



## Third-party Assurance

The Kingdom of Thailand's sustainable financing framework has been verified and approved by an external reviewer since 2020 for the first Thailand's sustainability bond series.

"Sustainalytics is confident that KOT is well-positioned to issue sustainability bonds and that the Kingdom of Thailand Sustainable Financing Framework is robust, transparent, and in alignment with the four core components of the Green Bond Principles 2018, Social Bond Principles 2020, Green Loan Principles 2020, and ASEAN Sustainability Bond Standards 2018." – Sustainalytics

Our issuance of sustainability bonds in 2020 (ESGLB35DA) also met the pre- and post-issuance requirements of the Climate Bond Standard as verified by an independent third-party .

"The Kingdom of Thailand Sustainability Bond is in accordance with the Pre and Post Issuance requirements of the Climate Bond Standard Version 3.0 and Associated Low Carbon Transport Sector Criteria" - DNV GL

## Certification and awards

### Certification

Our sustainability bond (ESGLB35DA) has been certified by the Climate Bonds Initiative (CBI), which will boost the confidence of the investors to invest in sustainability bond as well as support Thailand's own effort in achieving the United Nations Sustainable Development Goals (UNSDGs).

### Awards

At the end of fiscal year 2022, The sustainability bond issued by Ministry of Finance has received a total of 6 awards from various financial magazine and organizations shown as below:

#### The ASSET

- Thailand's Best Issuer for Sustainable Finance 2020
- Thailand's Best Sustainability Bond 2020
- Regional's Best Sustainability Bond 2020

#### International Financing Review Asia (IFR) ASIA

- Regional Awards : Domestic Bond 2020

#### Thai Bond Market Association (ThaiBMA)

- Best Bond Awards 2020: Environmental, Social and Governance Bond (ESG Bond)

#### Climate Bonds Initiative (CBI)

- 6th Climate Bonds Awards: Sovereign Green Market Pioneer (Thailand) in 2020

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