



Task Force on Climate-related Financial Disclosures: TCFD

Bangkok Bank Public Company Limited

Across the world, people are facing the impacts of climate change such as storms, floods, heat waves and droughts that occur with higher frequency and are likely to intensify in the future. The main cause is the emissions of greenhouse gases from human activities, resulting in rising temperatures at a global scale. The report of the Intergovernmental Panel on Climate Change (IPCC) in 2021 found that global temperatures have already increased by 1.1 degrees Celsius and there is a chance that in the next 1 - 2 decades global temperatures will increase more than 1.5 degrees Celsius. In addition, the United Nations has published statistical data dating back 82 years (1941 - 2023), finding that 2023 was the year the world had the highest temperature on record. At the same time, the Secretary-General of the United Nations announced that the world has now entered the era of global boiling and according to a study on the Global Climate Risk Index (CRI) in 2021 by Germanwatch, it was found that Thailand is ranked 9th among 180 countries in the world for countries that are at risk of being affected by climate change. Therefore, if there is no urgent action taken to mitigate and solve the problem of climate change, it will lead to damage to the economy, ecosystem and the wellbeing of the people.

This situation has led many countries including public sector, private sector, civil society and other sectors to pay serious attention to reducing greenhouse gases and transitioning to a low-carbon society to alleviate impacts and build the ability to adapt to climate change for both businesses and households. This can be seen from the announcement of carbon neutrality goal and no greenhouse gas emission goal or net zero at the national and organizational levels. In addition, at the 28th Conference of the Parties (COP) held in the United Arab Emirates between 30 November and 12 December 2023, there was an emphasis on maintaining the temperature to increase below 1.5 degrees Celsius by the end of the century in accordance with the Paris Agreement. Moreover, other important agreements have also been made, including increasing the production of clean energy three times (Triple Renewable Energy), increasing energy efficiency two times (Double Energy Efficiency) by 2030, and the transition away from fossil energy. Such changes are considered as risks and opportunities for businesses while businesses that can adapt well are immune to risks and able to seize opportunities ahead of competitors.

The Bank recognizes the importance of risks and opportunities arising from climate change for its customers and the Bank. Therefore, we consistently monitor the situation as well as focusing on strengthening the capacity to assess climate risks and opportunities, both physical and transitional so that the Bank can appropriately manage risks and implement various measures to tackle the impacts of climate change on its business as well as providing financial support to activities or projects that help all sectors reduce or mitigate the impacts of climate change. The Bank prepared this report based on the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), covering four key elements: governance, strategy, risk management and metrics and targets to demonstrate our commitment to disclosing information on our organization's climate management that complies with international standards.



- **Governance**

Organizational oversight of climate-related risks and opportunities.

- **Strategy**

Impact of climate-related risks and opportunities on business strategy and financial planning.

- **Risk Management**

Process of identifying, assessing, and managing climate-related risks.

- **Metrics and Targets**

Indicators and targets used to assess and manage climate-related risks and opportunities.

1. Governance

The Bank designed organization structure to support environmental, social and governance (ESG) performance including those related to climate as well as defining roles and responsibilities from the Board level to operational level to ensure that its management of risks and opportunities related to ESG and climate is efficient and effective in accordance with the Bank's policies and strategies including sustainability and climate change policy guidelines of regulatory agencies.

Board of Directors is responsible for formulating and reviewing vision, policies, business directions, business goals and strategies as well as overseeing all risks in the organization by playing a key role in formulating the risk management policy and strategy and monitoring the Bank's risks to be within acceptable levels. The Board of Directors holds meetings at least once a month.

Risk Oversight Committee has a duty to ensure that risk management is properly and continuously undertaken with efficiency and effectiveness in accordance with overall risk management policy and strategy covering the management of key risks of the Bank including ESG risks and climate-related risks. The Risk Oversight Committee holds meetings at least once every quarter.

Corporate Governance Committee is responsible for upholding good corporate governance and sustainability in the Bank by ensuring that the principles of good corporate governance and sustainability are practiced. The committee is also responsible for considering a sustainability strategy that suits the Bank's business operations, driving and monitoring progress as well as giving opinions to the Board of Directors on the risks and opportunities relating to ESG and climate issues. The committee's meetings are held on a quarterly basis to deliberate matters.

The Management is responsible for driving and administering the operations in accordance with the policies, strategies and goals approved by the Bank's Board of Directors, including considering and determining operational guidelines, action plans, work systems, work processes, as well as managing human resources and other resources appropriately. ESG factors including climate are to be incorporated into assessing and managing risks and seeking business opportunities to ensure we achieve the set goals.

In 2023, the Bank had discussions at relevant committees' meetings on issues related to climate management that includes the Bank's risk management covering risk factors related to ESG and climate change as well as organizing knowledge sharing activities on ESG issues and climate change for executives and employees.



Business Units are responsible for managing risks to their own units to be within the approved levels and in accordance with the risk management policy of the Bank, including conducting decarbonization plan for the portfolios of loans.

Strategy Division has a duty to formulate policies and strategic plans to drive business according to policies, strategies and business plans as well as monitoring business performance.

Risk Management Division is responsible for assessing, monitoring and controlling various risks that are material to the Bank, including ESG and climate risks, by working with business units and sustainability team to assess and manage environmental and climate risks, calculating the amount of greenhouse gases from customer activities in the Bank's credit portfolio (Scope 3 - Financed Emission), preparing greenhouse gas reduction plan for customers in the credit portfolio (Decarbonization Plan), and analyzing climate scenarios and conducting stress tests of customers in the credit portfolio as a basis for determining and adjusting the Bank's business strategies to be appropriate in the future.

Compliance Division has a duty to oversee and monitor all units under the Bank to ensure compliance with laws, rules, practices and regulations of the government including internal policies and practices imposed by the Bank.

Audit Division is responsible for review and audit of units of the Bank to ensure prudent and effective internal control.

Sustainability Team has a duty in sustainability planning and driving related activities including climate to be consistent with the Bank's sustainability policies and attain specified goals through communication, support, collaboration with related internal and external parties.

2. Strategy

Realizing potential opportunities, risks and impacts from climate through funding support provided to the business sector, the Bank is committed to offering credits and investing in activities or businesses that create positive impacts on the environment and the society. Moreover, we support the transition to a low-carbon society under Thailand's roadmap as well as promoting renewable energy, BCG and electronic vehicle industries according to the roadmap to attain carbon neutrality by 2050 and net zero greenhouse gas emissions by 2065. In addition, the Bank places importance on the reduction of direct greenhouse gas emissions from the Bank's activities from energy and resource consumption including indirect emissions from electricity consumption and business travels. To formulate strategies and manage climate risks and opportunities in a clear and comprehensive manner, the Bank has identified and analyzed opportunities and risks from climate change that affect the banking business, customers, and the Bank's value chain.

2.1 Assessment of opportunities and impacts related to environment and climate change

The Bank spots opportunities from the adaptation of various sectors in line with environmental policy and regulations aimed at transitioning to a low-carbon and green economy to reduce greenhouse gas emissions and mitigate the impact of climate change. The Bank, as a financial service provider, is positioned to help provide financial support to businesses and households to be able to adapt to the mentioned transition trend. The Bank identifies and analyzes climate opportunities that affect the banking business and customers as follows:

Climate Opportunity	Incident	Opportunity and Impact
1. Resource Efficiency	<ul style="list-style-type: none"> Economical and efficient use of resources such as replacement with energy/water-saving equipment, campaigns to save energy and water, wastewater treatment and reuse, garbage sorting and recycling. 	<ul style="list-style-type: none"> Reduction of operating costs of the Bank in the long run. Support for customers for both business sector and household sector to transition to low carbon business and society and to gain benefits from lower operating cost and daily expenses. Engagement and motivation for employees to conserve the environment and reduce greenhouse gas emissions at work and at home to make employees feel inclusive and proud of the Bank's environmental and climate efforts. Building positive image of the Bank related to environmental conservation and reduction of greenhouse gas emissions.
2. Energy Sources	<ul style="list-style-type: none"> Use of equipment that reduces greenhouse gas emissions. Installation of solar rooftops as sources of clean energy to save electricity charges and reduce electricity consumption from transmission lines. 	
3. Product and Service	<ul style="list-style-type: none"> Development of products and services that support green businesses and activities or activities that support the transition to more green activities. Support for green loans and credit for transition or reduction of greenhouse gases to mitigate impacts from climate change. Adoption of technology to promote easier access to financial services and broader customer coverage. 	<ul style="list-style-type: none"> Revenue generation and customer base expansion of the Bank for green businesses and businesses that are transitioning to low-carbon business. Knowledge sharing and support for customers to utilize the market for trading carbon credits and renewable energy. Building of business partner networks to create business opportunities and

Climate Opportunity	Incident	Opportunity and Impact
4. Market	<ul style="list-style-type: none"> Extension of customer base to green businesses and businesses with technology that helps with adaptation to climate change. Support for carbon credit market and renewable energy to generate business opportunities for customers. 	<p>enhance competitiveness of the Bank and our partners.</p> <ul style="list-style-type: none"> Risk diversification for the Bank's financial assets. Accumulation of knowledge and understanding on sustainability and climate change to serve customers as "Puan Koo Kit" (a trusted partner). Engagement with customers, employees and other sectors to drive toward greenhouse gas emission reduction goals at organization level and national level. Building of good image of the Bank.
5. Resilience	<ul style="list-style-type: none"> Adaptation to embrace impacts from climate change either related to rules and regulations or technology and market demand. 	<ul style="list-style-type: none"> Maintenance of leader position on sustainability and trust building for stakeholders. Enhancement of market value of the Bank.

2.2 Assessment of risks and impacts related to climate change

The Bank assesses risks and opportunities related to environment and climate change to understand how they will impact customers and the Bank both transition risks and physical risks as well as estimating timing of those risks which can be classified as short term (ST), medium term (MT) and long term (LT) as follows:

Types of climate-related risks

Physical risks are defined as risks that may cause damage to assets, businesses, agricultural products and people's wellbeing as a result of acute natural disasters such as storms, floods, heat waves and chronic climate change such as higher temperature, higher sea level and change in rainfall.

Transition risks are risks that may affect asset values, competitiveness, financial positions and businesses of related sectors due to key factors including rules and policies related to climate from the government and counterparties in the supply chain, development of low-carbon technology to replace existing high-carbon technology, change in consumer behavior and more attention from investors on environment and climate change.

Definition of time frame for risks and impacts analysis related to environment and climate change

- Short term (ST): may happen in 1-3 years.
- Medium term (MT): may happen in 3-10 years.
- Long term (LT) may happen after 10 years.

Climate-Related Risk	Incident	Risk and Impact	Time Frame
1. Transition Risk			
1.1 Current Regulation and Legal Risk	<ul style="list-style-type: none"> Non-compliance with requirements from regulatory agencies or applicable laws on environment and climate change. 	<ul style="list-style-type: none"> Higher business costs and expenses to improve operations or be prepared under imposed requirements and laws such as additional investments. Potential fines and reputational damage resulted from noncompliance with requirements and laws. Risks and impacts on financial positions and business performance of customers which may affect quality of assets and values of collaterals of the Bank including debt payment ability of customers. 	ST - LT
1.2 Emerging Regulation and Legal Risk	<ul style="list-style-type: none"> Trends toward stricter regulations and laws related to environment and climate change including reporting on greenhouse gas emissions, information disclosure on climate for organizations according to international standards, carbon tax and international trade measures. Strictness in pushing financial institutions to conduct business with consideration to environmental dimensions and climate change in accordance with the policy of the Bank of Thailand (BOT), which requires financial institutions to include such factors as part of proper business operations. 	<ul style="list-style-type: none"> Higher business costs and expenses to correct or improve operations or be prepared under imposed policies, standards, industrial standard manuals, requirements and laws. Potential damage on reputation and confidence of stakeholders from failure to comply with policies, standards, and industry standard manuals, requirements and laws when comparing with competitors. 	ST - LT

Climate-Related Risk	Incident	Risk and Impact	Time Frame
1.3 Technology Risk	<ul style="list-style-type: none"> Development of technology with low greenhouse gas emissions such as renewable energy technology, Carbon Capture, Utilization and Storage (CCU), energy storage technology and energy efficiency management technology to replace traditional technology with high greenhouse gas emissions. Failure in investment in new technology with low greenhouse gas emissions. 	<ul style="list-style-type: none"> Customers using technology with high greenhouse gas emissions may lose market shares to competitors using technology with low greenhouse gas emissions. Transition of business models to low carbon emissions can potentially be uncertain and incur high costs. Customers who invest in new technology may face higher R&D costs and high capital expenditure which can lead to losses in case of failure. Risks and impacts on financial positions and business performance of customers which may affect quality of assets and values of collaterals of the Bank including debt payment ability of customers. 	MT - LT
1.4 Market Risk	<ul style="list-style-type: none"> Behaviors in using products and services that are concerned with impacts on the environment and climate change; for example, discontinuance of certain types of products such as single use plastic and use of products with green labels despite higher costs. 	<ul style="list-style-type: none"> Changing consumer behaviors and needs may negatively affect performance of customers which can affect quality of assets and values of collaterals of the Bank as well as debt payment ability of customers. 	ST - LT
1.5 Reputational Risk	<ul style="list-style-type: none"> Higher expectations from various stakeholders to ensure that the Bank conducts business with environmental and social responsibility and plays a role in mitigating risks and impacts from climate change especially businesses that have potential to make a severe impact on the environment or the society or emit high volume of greenhouse gases. 	<ul style="list-style-type: none"> Businesses that are unable to meet expectations of stakeholders may lead to negative impacts on sales revenue of products and services, ability to access funds (from lower weighting on equity or debt instruments of investors) including organization image and ability to attract and retain talent especially new generations. Impacts on financial positions and performance of customers resulted from reputational damage which may affect 	MT - LT

Climate-Related Risk	Incident	Risk and Impact	Time Frame
	<ul style="list-style-type: none"> Expectations for the Bank to be a financial intermediary that is involved in the mitigation of risks and impacts related to the environment and climate change. 	quality of assets and values of collaterals of the Bank as well as debt payment ability of customers.	
2. Physical Risk			
2.1 Acute Physical Risk	<ul style="list-style-type: none"> Acute natural disasters such as storms, floods, and heat waves. 	<ul style="list-style-type: none"> Impact on assets of businesses, manufacturing of products and service offering, transportation and supply chain disruption. Higher expenses from business and service improvements, maintenance of assets and remedies for customers and employees including higher insurance expenses. Lower value of assets and collaterals from assets located in the areas with high risk of natural disasters. Impacts on financial positions and performance of customers which may affect quality of assets and values of collaterals of the Bank as well as debt payment ability of customers. 	ST - LT
2.2 Chronic Physical Risk	<ul style="list-style-type: none"> Chronic natural disasters such as increase in temperature, higher sea level and change in rainfall. 		LT

2.3 The Bank's strategies for transitioning to a low-carbon economy

• Management of greenhouse gases generated from the Bank's internal operations

The Bank is committed to systematic environmental and energy management in order to mitigate environmental impacts that may occur from the Bank's operations by setting environmental and energy conservation policies as a framework for operations as well as applying ISO 14001:2015 standards to systematic environmental management and energy conservation covering comprehensive planning, setting of goals and action plans, assessment of environmental risks and impacts, performance tracking and monitoring, setting of guidelines for improvement. This includes development of data management tools for energy and resource consumption, and greenhouse gas emissions that cover the entire organization. Moreover, the Bank also promotes knowledge and understanding as well as participation of employees on issues related to environmental conservation, energy saving and reduction of the organization's carbon footprint.

At present, the Bank has implemented the Bualuang Save the Earth project with the objective to carry out activities that help reduce the use of energy, resources, waste, and carbon footprint including sharing relevant knowledge. In 2023, the Bank undertook a number of important efforts ranging from office equipment modification to increase energy efficiency, such as air conditioners, LED bulbs, etc., replacements of branch cars from cars that use internal combustion engines to ones with electric drive systems, to changing of employee work processes to digital to reduce paper use and the development of digital banking services to reduce the carbon footprint from traveling to branches and using paper documents for making transactions. In addition, the Bank has also reduced the amount of general waste that goes to landfill to help reduce greenhouse gas emissions under the Bualuang Save the Earth: 3R+ (Reduce, Reuse, Recycle Plus) project by promoting comprehensive employee participation in waste management, starting from waste reduction, correct waste sorting to waste reuse and recycle. The Bank has expressed its intention to support the implementation of Bangkok's goals on bio-circular-green (BCG) economy which received consensus at the APEC Summit in Thailand in 2022 through the announcement of a target of zero waste to landfill at the Rama III Office Building by 2025. In addition, the Bank organized training courses and activities to support and educate employees about energy and environmental conservation, such as waste separation at the Bank course, energy conservation in buildings and offices course, etc.

Additional details of the management of greenhouse gases from the Bank's operations can be found in the 2023 Sustainability Report under the subject Environmental and Carbon Footprint, pages 70-79.

• Financial support for environmentally friendly businesses

The Bank aims to provide credit support for projects and activities that are environmentally friendly and use resources efficiently to strengthen customers' capacity to transition to a low-carbon economy and contribute to achieving climate change goals under the Paris Agreement. The opportunities and risks of the environment and climate change are integrated into the operational plans of relevant business units and the offering of loan products that can meet the needs of both business and individual customers, consisting of Loans for Investment in Renewable Energy Businesses, Bualuang Green Loans, Bualuang Green Solar Energy Loans, Business Loans for Business Agility, Bualuang Poonphol Green Loans and Bualuang Green Home Loans. In addition, the Bank also offers investment products that take into account environmental impacts and help preserve the environment comprising green bonds, Bualuang BCAP Clean Innovation Fund (BCAP-CLEAN), Bualuang Sustainability Investing Portfolio (B-SIP), Bualuang Sustainable Investing Portfolio RMF (B-SIPRMF), Bualuang Sustainability Investing Portfolio Super Savings Fund (B-SIPSSF) and Bualuang Top-Ten Thai ESG Fund (B-TOP-THAIESG). The Bank continuously promotes these products through various communication channels of the Bank as well as conducting surveys and assessments of customer needs while raising awareness and promoting participation of customers on risks and opportunities from climate change along with developing and offering loans and investment products.

Additional details of sustainable financial products can be found in the 2023 Sustainability Report under the subject Sustainable Finance, pages 45-54.

• **Promotion of knowledge and understanding on risks and opportunities from climate change**

In the early stages of the transition to a low-carbon economy, awareness and understanding of the businesses involved is fundamental. Therefore, the Bank focuses on creating awareness and understanding of the opportunities, risks, and impacts of climate change to business customers especially SME customers to prepare their businesses to be able to not only plan ahead and better cope with potential changes that may occur in the future but also to maintain or create competitive advantage in the long term. In addition, the Bank places importance on the preparation of the Bank's employees to be able to provide useful advice and recommendations to customers by providing continuous training to educate employees in related divisions and developing high potential employees through the BU Champion campaign, which aims to build and develop talent with specialized expertise to serve as advisors of each division and pass on knowledge to other employees within the division. In 2023, the Bank organized learning exchange activities both online and onsite in different locations on climate change issues for executives, employees, and customers of the Bank as follows:

Activity	Target Group
A seminar on "Energy Transition and Solutions for Businesses in the Age of Climate Change"	Executives and employees of division responsible for corporate clients, small and medium-sized enterprises.
A 2023 virtual forum on "Carbon Credit Market and Renewable Energy: Opportunities for Businesses in the Age of Climate Change"	Executives and employees of division responsible for corporate clients, small and medium-sized enterprises.
A seminar on "Carbon Footprint, Carbon Credit & Carbon Credit Market and Roles of Credit Work at Present and in the Future"	Employees under BU Champion campaign
A seminar on "Climate Risk, Carbon Reduction and Business Opportunities"	Executives and employees of Risk Management Division and Credit Policy Division
A seminar on "Reducing Business Costs through Solar Rooftop Clean Energy"	Employees and business customers
A seminar on "PATHWAY TO NET ZERO BUILDING (Green building)"	Employees and business customers
Training on "Inside Thailand Taxonomy: Journey to Sustainability"	Employees of Credit Policy Division and Corporate, Commercial and Business Banking.

3. Risk Management

The Bank's risk management covers risks that are important to the banking business, including credit risk, market risk, operational risk, strategic risk, liquidity risk and information technology risk as well as other related risks such as reputational risk, legal risk, etc. The Bank has integrated both physical and transition environmental and climate change risk factors into its risk management process under the 3 Lines of Defense approach where business units, strategy unit and risk management unit work together to identify, assess and manage environmental and climate change risks in customers' credit portfolios, as well as reporting to the management and relevant committees on a regular basis.

Risk Management Process



1. Identification of major risks significantly affecting the Bank's business operations.



2. Assessment of risks and establishment of risk mitigation measures.



3. Monitoring and control of risks within acceptable levels.



4. Reporting of risks to relevant parties to ensure timely risk management.

3.1 Identification and assessment of risks and impacts related to climate

The Bank is fully aware of risks and opportunities related to the environment and climate change both physical risks and transition risks which will affect the Bank's internal operations directly including operational risk and reputational risk as well as indirectly through the Bank's customers or other external factors such as credit risk, market risk, liquidity risk and reputational risk.

Transition of environmental and climate change risks and impacts on existing risks of the Bank

Type or Risk	Risk and Impact
Credit Risk	<ul style="list-style-type: none"> Physical and transition risks may affect debt payment ability of customers due to higher defaults on debts which can deteriorate the overall credit quality of the Bank's portfolio. Physical risks can potentially cause values of collaterals of customers at the Bank to deteriorate. Risks may arise from risk burden in the sectors that emit high volume of greenhouse gases or in countries with higher risk from natural disasters.
Market Risk	<ul style="list-style-type: none"> Physical and transition risks may affect the enterprise value, price and price fluctuations in securities that the Bank holds.
Liquidity Risk	<ul style="list-style-type: none"> Risks arise from withdrawals of deposits, uses of credit lines or additional credit lines from customers for their investments in low-carbon businesses or technology or improvement or maintenance of assets affected by natural disasters. Physical and transition risks may cause customers to be unable to fulfill their debt obligations within specified periods or unable to sell securities placed as collaterals to pay debts which can potentially affect the Bank's liquidity. Physical and transition risks may lead to lower liquidity of securities the Bank holds as there is no demand in the market for those securities.
Operational Risk	<ul style="list-style-type: none"> Physical risks may disrupt customer services or assets or in case that the Bank's operation systems are damaged by natural disasters. Physical risks can potentially affect health, work and wellbeing of the Bank's employees.
Regulatory Risk	<ul style="list-style-type: none"> Risks arise from non-compliance with environmental or climate requirements imposed by regulatory agencies or government which can result in fines or reputational damage.
Reputational Risk	<ul style="list-style-type: none"> Impact on reputation is possible from being the financial sponsor for businesses or projects that severely impact the environment and the society or emit high volume of greenhouse gases. Inadequate management of climate risks may affect trust of the Bank's stakeholders such as shareholders, investors and customers.
Strategic Risk	<ul style="list-style-type: none"> Strategic formulation that is not aligned with risks and opportunities related to climate and expectations of stakeholders may impact the Bank's competitiveness, ability to generate returns and investment attractiveness for investors.

3.2 Management and Reporting of Climate-Related Risks

• Operational Risk

The Bank integrated key physical risk factors such as flood that happened often and caused damage to many businesses and households as a part of operational risk management with proper risk assessment and monitoring to set out measures, manage and control risks to be within acceptable levels. In addition, contingency plans are in place in case of flood to be prepared to prevent and mitigate damage to life and assets of the Bank.

The Bank has taken following measures to adapt to climate change:

- Installation of flood barriers and water pumps in branches and buildings located in areas of repeated flooding, the development of contingency plans for flooding, and insurance to protect against flood damage.
- Installation of uninterruptible power supplies (UPS) and/or generators for branches, buildings and ATMs located in areas that experience frequent power outages due to severe storms.

• Liquidity risk

For stress testing under the Internal Capital Adequacy Assessment Process (ICAAP), the Bank has identified a climate change risk factor as one of the risk factors that the Bank takes into consideration in order to manage risks in a comprehensive and appropriate manner as well as maintaining adequate capital levels to operate the business during crisis.






• Credit and reputational risks in the credit approval process.

The Bank is fully aware as a financial supporter of activities or projects that may have severe social and environmental impacts including climate change such as large infrastructure systems, power plants, and mines. For these projects, in case that risk management is not properly managed, it may have both direct and indirect effects on the Bank's reputation and operating results. The Bank has therefore established a policy for responsible lending and a list of loan applicants or activities for which the Bank will not provide credit support. Moreover, ESG and climate risk factors are integrated into business and project loan consideration process from KYC process to fact-checking steps so that loan applications are carefully reviewed under the credit approval standards set by the Bank. At the same time, the Bank applies the Equator Principles to its loan consideration process that requires comprehensive consideration of risks and impacts on the environment and society. Data on greenhouse gas emissions scope 1 and 2 and risk management and environmental impacts are used in loan approval considerations to prevent risks related to laws and debt payment ability as well as the image of the Bank.

• Credit Risk in the Portfolio

The Bank keeps abreast of changes in policies, rules, and regulations related to Thailand's transition to a low-carbon economy. We also closely monitor the progress of low-carbon technology and business adjustments in risky industries. In 2024, the Bank has studied and prepared a climate change scenario analysis to consider the impact of transition risk to credit risk in the portfolio of loans in 7 industry sectors that are at risk and have a combined credit risk of 30.03% of the total risk the portfolio. These industries include power generation, oil and gas, food processing, chemicals, mining, vehicle production, and aviation. The Bank uses climate scenarios from the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) covering 2 scenarios (Net Zero and Current Policy) as a reference.

The preparation process and the results of the impact analysis of transition risks in the climate scenarios are as follows:

-  (1) Select climate scenario to be used in conducting the stress test.
-  (2) Specify factors that are expected to have transition risk with an impact on the credit portfolio, such as product quantity, price, carbon cost, impairment of assets, etc.
-  (3) Set assumptions for factors used in each climate scenario.
-  (4) Conduct a stress test to consider the impact of transition risk on the financial position and operating results of the credit portfolio.
-  (5) Analyze the results from conducting the stress test.

The assessment results found that transition risks potentially impact the following 6 industries:

Industry	Impact
(1) Mining Industry (Coal Mines)	The Net Zero policy is leading to a transition to renewable energy, resulting in a decrease in demand for coal, oil and natural gas, coupled with the increasing cost of carbon taxes.
(2) Energy Industry	
(3) Oil & Gas Industry (Upstream)	
(4) Chemical Industry (Upstream Petrochemical)	Expected to be affected by the EU's Cross-Border Carbon Adjustment Measure (EU CBAM) which will be extended to include petrochemical products and other carbon pricing adjustment measures in other countries that will be gradually announced in the future.
(5) Food Processing Industry (Palm Oil)	Expected to be affected by consumers reducing their consumption of palm products and the increasing cost of carbon taxes.
(6) Food Processing Industry (Meat and Dairy Products)	Livestock farming is a major source of high methane emissions while the potential to reduce greenhouse gas emissions in the industry is limited. It is expected to be affected by the increasing cost of carbon taxes

In addition, the Bank has conducted a Climate Scenario Analysis to consider the impact of physical risks and transition risks on both business and retail customers with buildings as collateral. The Bank refers to 3 climate scenarios from the NGFS which are Net Zero 2050, Delayed Transition, and Current Policy, considering the impact on business continuity and the value of customers' collateral. The results of the analysis show that the Bank's customers are most affected in the Delayed Transition scenario because their business operations and collateral are impacted by both physical risks from disasters that are more frequent and severe (Physical Risk Impact) before 2030, when no action has been taken to reduce greenhouse gas emissions, as well as transition impacts after 2030 from costs and investments to retrofit buildings to be more energy efficient. In the Current Policy scenario, customers are primarily affected by physical risks from disasters, while in the Net Zero 2050 scenario, customers are primarily affected by the need for transition.

4. Metric and Targets

4.1 Metric and targets related to climate

The Bank set forth metric and targets for both its internal operation and financial support provided to customers to mitigate environmental and social impacts as well as promoting adaptability to climate change. We regularly monitor and assess our undertaking while performance against the targets is considered as one of the factors of the performance evaluation as well as compensation decisions to incentivize the Bank's business unit managers and the Bank's officers in relevant divisions.

The Bank set targets to reduce GHG emission of scope 1 and 2 each for 25% by 2030, compared to 2020 which is a base year. These targets are aligned with the Science Based Targets initiative (SBTi), well below 2 °C scenario.

Metric	2023 Target	2023 Performance
Reduction of direct and indirect greenhouse gas emission (scope 1 and 2)	<ul style="list-style-type: none"> 7.5% decreased in scope 1 and scope 2 each for greenhouse gas emissions compared to 2020 (base year). 	<ul style="list-style-type: none"> 48.48% increase in scope 1 greenhouse gas emissions compared to 2020 (base year). 3.13% decrease in scope 2 greenhouse gas emission compared to 2020 (base year).
Developing and providing loans and investment products that support the achievement of the United Nations Sustainable Development Goals and the	<ul style="list-style-type: none"> Development and provision of sustainability investment products that promote ESG. 	<ul style="list-style-type: none"> Distribution of fixed income instruments for ESG worth Baht 28,366 million. Offering of 9 funds to promote sustainability with the total net asset value of Baht 14,732 million.

Metric	2023 Target	2023 Performance
climate change goals under the Paris Agreement.	<ul style="list-style-type: none"> Promotion of eco-friendly loans for business and individual customers. 	<ul style="list-style-type: none"> Support for Bualuang Green loans of Baht 720 million and Bualuang Green Solar Energy loans of Baht 2,000 million. Support for Bualuang Poonphol Green Loans of Baht 11 million and Bualuang Green Home Loans of Baht 58 million.

4.2 Volume of greenhouse gases from the Bank's internal operations

The Bank places importance on collecting data on the volume of greenhouse gases generated by the Bank's operations while the Bank has developed a system for managing information on the environment and resource use to enhance the efficiency of data management and apply such data in planning and setting goals to reduce the volume of greenhouse gas emissions arising from the Bank's operations. The Bank calculates the volume of greenhouse gases according to the Carbon Footprint Assessment Standards of the Thailand Greenhouse Gas Management Organization (TGO) and arranges for data to be verified by an external independent agency to ensure the accuracy of data reporting.

(Unit: Ton of carbon dioxide equivalent)

Type	2020	2021	2022	2023
Greenhouse gas scope 1	14,039	11,619	21,771	20,845
Greenhouse gas scope 2	61,193	57,674	60,633	59,279
Greenhouse gas scope 3	1,592	1,306	1,512	1,940
- Category 1: Water and paper consumption	1,507	1,296	1,265	1,306
- Category 6: Business travels	85	10	247	634

Additional details of the performance of efforts on climate change can be found in the 2023 Sustainability Report under the subject Sustainable Finance pages 45-54 and Environmental and Carbon Footprint, pages 70-79.