SCB

CLIMATE CHANGE

REPORT

A Progress Report on Task Force on Climate-Related Financial Disclosures (TCFD) Recommendations Implementation

June 2021

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INTRODUCTION

According to the United Nations Inter-Governmental Panel on Climate Change (IPCC), human-induced warming has reached approximately 1°C above pre-industrial levels in 2017 (i.e., increasing at 0.2°C per decade)[1]. The IPCC's assessment of scenario which global temperature reaching 1.5°C and higher level of warming indicates that increasing temperature beyond 1.5°C will cause unprecedented impacts on biodiversity and ecosystem as well as human health, livelihoods, food security, water supply, human security, and economic growth.

For Thailand, the Environmental Research Institute of Chulalongkorn University has stated that 23% of the land in Thailand is affected by climate change, from phenomena such as flash floods from heavier rainfalls, droughts, and rising sea levels. These natural phenomena will affect beyond Thailand and the consequence of changing weather pattern, extreme weather and increasing global sea level will have physical impacts on multiple business sectors such as agriculture, logistic, tourism, etc.

These natural phenomena impact company operations. If the company neglects the importance of identifying appropriate and immediate measures or approaches for addressing climate change risks, impacts from climate change will inevitably take toll on the financial sector and banks in its role as a capital provider.

SCB understands the importance of climate change mitigation and adaptation for both the Bank and society. Therefore, the Bank has initiated and integrated considerations of climate change risks and opportunities management throughout the business and operations.

Therefore, SCBX the parent company of SCB embarking on an important mission to join the world's leading companies in becoming a Net Zero financial technology group by 2050 in line with the Paris Agreement to limit global warming to well below 2, preferably to 1.5 degrees Celsius. This will mark the new beginning our the group's journey to combat climate change.

This report intends to communicate SCB management approach and progress in alignment with the disclosure requirement of the TCFD's Recommendations.

Revision: June 2022

1 Allen, M.R., O.P. Dube, W. Solecki, F. Aragón-Durand, W. Cramer, S. Humphreys, M. Kainuma, J. Kala, N. Mahowald, Y. Mulugetta, R. Perez, M. Wairiu, and K. Zickfeld, 2018: Framing and Context. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]

GOVERNANCE

Governance on Climate-Related Risks and Opportunities

The Bank places great importance on managing risks and opportunities associated with climate change by setting commitments and management approaches through the SCB and SCB Subsidiary Sustainability Policy, overseen by the Sustainability Steering Committee chaired by the President. The committee consists of senior executives from relevant business units responsible for steering sustainability performance toward the set targets and plans.

This governance structure is also deployed to also manage other material sustainability issues. At the same time, the Bank has set up a Climate Risk Assessment Taskforce with responsibility for studying and assessing climate change risks to the Bank's portfolio and systematically integrating the risks as part of bank-wide risk management system.

In terms of measuring performance, SCB also identified indicators tied to climate change mitigation incentives, from corporate-wide digital banking direction to specific targets for climate related financing as well as other sustainable financing supporting the SDGs. Similarly, emissions of GHG Scope 2, i.e., electricity usage, is also tracked and evaluated as part of performance of facility management function.

SCB Governance Structure on Climate Change Risk Management

STRATEGY

Strategy to Address Climate Change Impacts

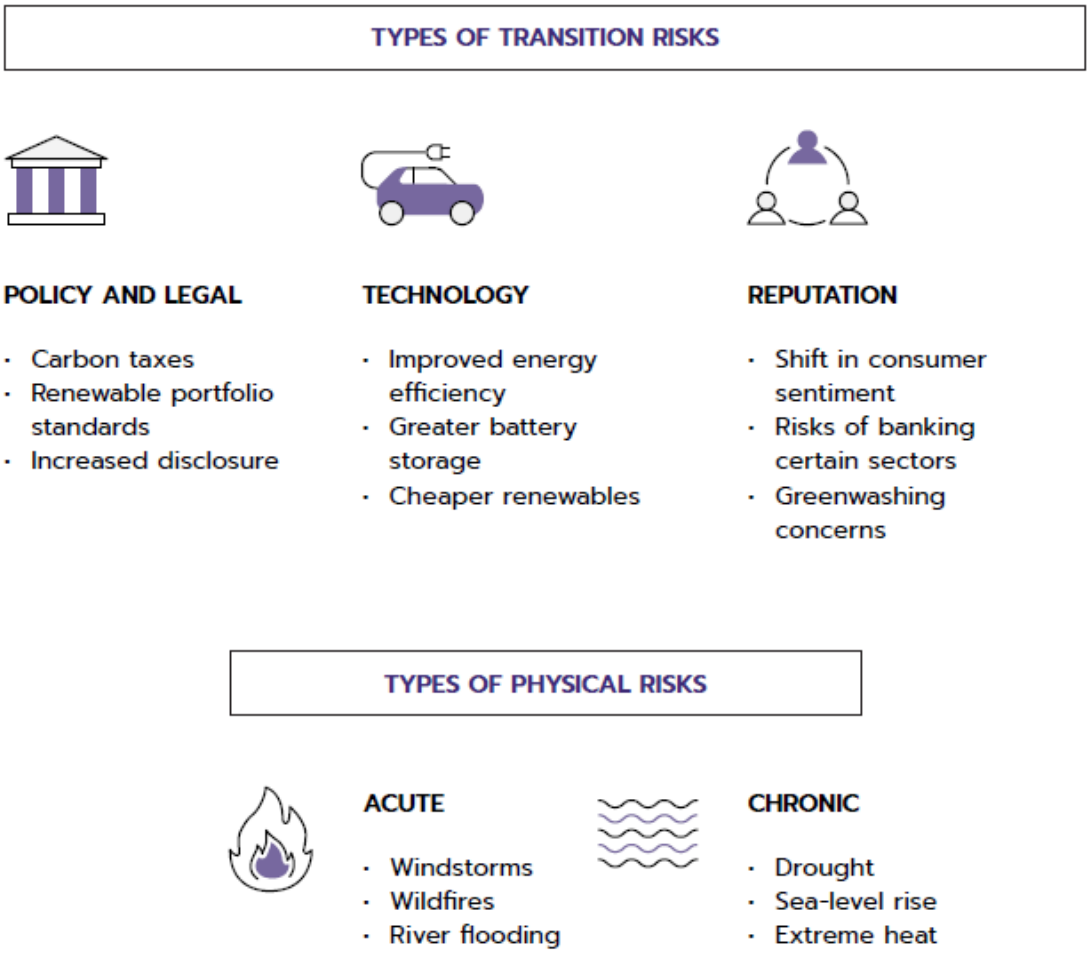
Climate Risk and Resilience is identified as one of the six strategic goals under SCB's Sustainability Framework. Therefore, the Bank performs an analysis of climate change risks and their impact upon the Bank's portfolio by integrating climate risk issues as part of its risk management system. Aligned with the recommendations from the Taskforce on Climate-Related Financial Disclosures (TCFD), climate change risk scenario analysis is conducted in order to provide inputs for stress testing, to inform industry limits, and to adjust the Bank's business plan accordingly.

In addition, the Bank continues to develop products and services that incentivize adaption to climate change in order to create balance between risk management and business opportunities, while at the same time supporting the transition to becoming a low-carbon society.

Risks Associated to Climate Change

SCB analyzes financial risk associated to climate change based on risk events those includes physical risks and transition risks.

Types of Climate Change Risks



Transition Risk	Physical Risk
A transition towards a low-carbon economy may bring about policy or regulatory change, new rules and regulations, new technologies, and new market initiatives. These factors contribute to both positive and negative impacts upon business in terms of business models, management approaches, reputation, and financial returns. The degree of severity and speed of impacts depends on different factors, such as a company's industry type, geographical location, or the volume of emitted greenhouse gases. Nevertheless, the most significant climate change risk is that of transitional risks resulting in regulatory change which will affect the customer's repayment ability (specifically, those in carbon intensive sectors) since the government may regulate the amount of carbon emissions from those assets. Mindful of this scenario, the Bank monitors the risk of coal-fired power plant portfolio. It was acknowledged and SCB began to shift our lending portfolio from conventional power plant, especially coal-fired power plant, to renewable and transitional power plant (such as gas-fired power plant) which has lower carbon intensity. Currently, coal-fired power plant makes up less than 9% of the Bank's power plant portfolio, smaller than renewable energy and transitional energy.	Physical risks are the consequences of acute or chronic climate change which results in natural phenomena such as the increased severity of floods and prolonged droughts. These physical risks affect operations of the Bank and its value chain, which can significantly impact overall operations and financial returns. Recognizant of the importance of taking part in mitigating impacts resulting from climate change, which is a global issue, SCB provides various financial instruments to businesses and activities in order to help mitigate or contribute to climate change risk adaptation. To systematically drive bank-wide performance, SCB embeds sustainability thinking and practices, including climate change risk management into corporate strategy through the deployment of a Balanced Scorecard. Each business unit is required to set targets and indicators supporting the development of products and services that help mitigate impacts from climate change risks. Similarly, SCB also assesses potential impact of physical climate change risks upon client's operations in oil and gas sector which the Bank defines as a sector highly exposed to climate change risks. SCB views that extreme weather, including more intense cyclones and extreme rainfall, could disrupt the client's operations. However, the impact on physical asset is considered low since operations of clients are not located in extreme-weather areas, and asset insurances are also in place. Similarly, the Bank believes disruptions to operations could affect client's repayment ability resulting in decreasing credit rating for one notch (scale). However, the Bank's Loan Loss Reserve is sufficient to prevent significant impact if the scenario were to happen.

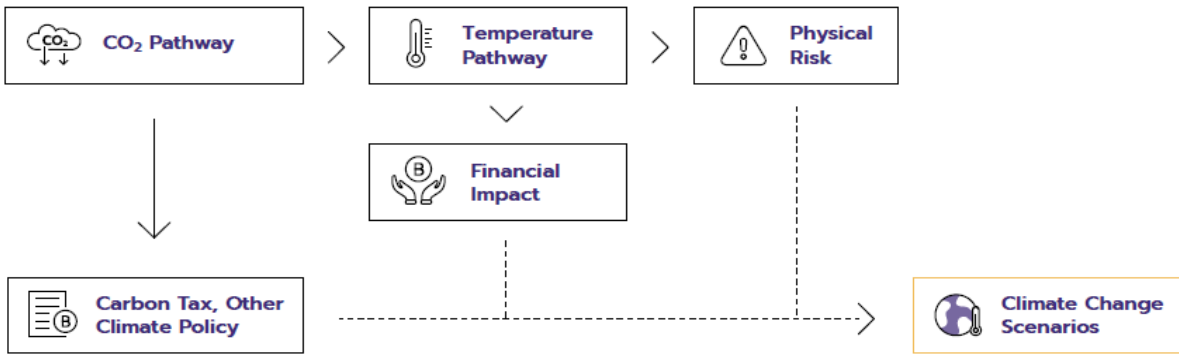
Nevertheless, these two types of risks are correlated, that is, the collective effort to transit to a low-carbon economy will lead to a shift in business due to the adoption of new laws and regulations. However, physical risks such as extreme floods or droughts will be mitigated. On the other hand, without these efforts toward a low-carbon economy, physical risks will escalate as global temperatures continue to increase beyond 1.5 Celsius, causing severe natural disasters. Meanwhile, business risks resulting from changes in rules and regulations aimed at a low-carbon economy will decrease. Nonetheless, efforts to mitigate climate change risks will also mitigate physical risks as governmental entities will enact relevant rules and regulations. This will directly impact corporate policy on climate risks

as well as market demand for limiting greenhouse gas emissions, such as the implementation of a carbon tax or considering doing business with green companies. These changes will directly impact carbon-intensive businesses and those that produce significant greenhouse gas emissions, but nevertheless help reduce physical risks, contributing to a better environment.

CLIMATE CHANGE SCENARIO ANALYSIS

In 2020, the Bank worked with external consultant in studying and assessing risks associated with climate change, both in terms of physical risk and transition risk. The adopted methodology relies on frameworks and tools for identifying assumptions and scenarios associated with climate change. Along with an increase in global temperatures entailing physical risks from climate change, assumptions of estimated greenhouse gas emissions emitted by each industry are made in order to assess potential changes relating to rules and regulations as well as policies aimed as preventive measures. This holistic approach brings about valid assumptions which will be used to inform qualitative models for assessing impacts upon corporate portfolios as well as impacts upon the Bank due to potential default payments from corporate customers operating in industries exposed to climate change risks and impacts.

SCB Climate Change Risks Assessment and Scenario Analysis Flowchart



The adopted scenario was developed by the Network for Greening the Financial System (NGFS), a voluntary collaboration of central banks from each participating country, seeking to devise management approaches toward climate change risks specifically geared to the financial industry. SCB uses Moody's analytics methodology to apply NGFS scenarios to create macro-economic drivers considering both physical and transition risks. It is integrated into Probability of Default Model to identify sector which would likely have more impacted from climate change.

By performing systematic modeling of customer data in the Bank portfolio against its industry sector classification customers' sale and other financial and non-financial information, the Bank identified 156,159 tons of scope 1 and scope 2 emissions in 2021. The results showed that sectors with the highest carbon emission include power generation, manufacturing and mining respectively. This assessment allows the Bank to take into account Transition Risk which considers carbon pricing resulted from changing in regulation as one of the key factors

affecting customers and perform stress testing accordingly.

CLIMATE CHANGE ADAPTATION

Reaffirmed by our ESG risk assessment in portfolio and scenario analysis, SCB sees climate change adaptation as one of the most significant aspect which needs to be addressed. Accordingly, the Bank implements its efforts on climate change adaptation through digital transformation and credit risk management.

Digital Transformation

Digital transformation has been a key agenda for SCB and has seen continuous progress with the Bank's investment in SCB Transformation Program since 2016. Digital technologies have been part of its business models and are embedded into the Bank's operation. Subsequently, the Bank's internal IT infrastructure and architecture have been upgraded the state-of-art level to meet the changing business needs which is increasingly relying on a strengthened digital infrastructure.

As evident in a continuously increasing number of transactions made through digital platforms, which has exceeded that of physical branch, the Bank has successfully migrated customers to digital platforms supported by a robust IT infrastructure and architecture.

Nevertheless, when faced with a pandemic, a digitalized foundation has allowed the Bank to effectively maintain its business interruptions. The availability and accessibility of robust digital platforms have enabled customers to access banking services even there are disruptions from pandemic or physical risks of climate change such as extreme weather, heatwave, or floods.

In addition, the Bank has permanently adopted a Work from Anywhere policy which allows employees to work remotely from anywhere while delivering performance and results as agreed. This shift provides significant benefits to the Bank and its employees during COVID-19 to keep the business running while maintaining a healthy workforce and avoid disruptions to business. SCB believes that the Work from Anywhere arrangement will help reduce impacts and maintain business continuity even threatened by physical risk of climate change.

Nevertheless, the Bank has performed carbon pricing analysis on our own operation to fully understand the benefits of our investment in energy efficiency and improvement by applying potential carbon pricing of estimated 650 THB (based on the cost of 20 USD) on GHGs saving from electricity usage (i.e., Scope 2) to evaluate energy efficiency and understand low carbon investment within the Bank.

Credit Risk Management

In order to prepare for potential physical impacts from climate change, the Bank is planning to introduce a systematic process to integrate climate risk considerations in credit analysis in alignment with internationally accepted standards especially for loan with long repayment period and collateral assets.

Physical climate risk adaptation

Majority of SCB operations are located in Thailand which ranks 9th in the Global Climate Risk Index of GERMANWATCH institute in terms of its vulnerability and to climate change. Therefore, potential disruption to its own operations and owned assets must be taken into consideration. Potential impacts from physical climate risk include:

- SCB office buildings and data center face immediate and long-term risks from rising sea levels and flooding.
- Extreme weather and heat wave could keep employees from physically accessing workplace, resulting in reduced employee productivity and business reliability.
- Extreme weather could affect Bangkok's utility system such as electricity system disruption which could result in data security threats and system reliability.

The three physical climate risks where then reviewed as part of SCB business continuity management plan to see whether the existing framework and mitigation measures are sufficient to manage the identified risks or not. Currently, the Bank's business continuity management includes Work from Anywhere arrangement (as elaborated in Digital Transformation section), to a certain extent, is able to cope with the magnitude and possibility of the current level of risk. However, SCB closely monitors the development of climate change physical impact, especially in terms of extreme weather and will make adjustment as appropriate.

CLIMATE-RELATED OPPORTUNITIES

While perceived as a risk, SCB also sees climate change as a business opportunity review the Bank's approach towards becoming 'The Most Admired Bank'. Efforts to address climate change have illustrated opportunities for the Bank through national policy development of such as Alternative Energy Development Plan: AEDP2015 (2018-2037), Thailand Transportation Development Framework, National Electric Vehicle Policy Committee Plan and Thailand Mass-Transit Master Plan which could bring about business opportunities worth over 40 billion THB within 2023. In addition, SCB expects to have at least 14,500 million THB of opportunities to finance low carbon project/ activities in 2022.

Reaffirming SCB's commitments as well as seizing the emerging opportunities, the Bank develops Sustainable Finance Catalogue based on the Green Bond Principles, Social Bond, Principles and Green Loan Principles developed by International Capital Market Association (ICMA) and Loan Market Association respectively to define and classify green and sustainable businesses which also contribute to Sustainable Development Goals (SDGs).

Sustainable financial solutions to support different customer segments were then developed: sustainable financing for corporate segment's green business, SME Go GREEN's Product Program for small and medium enterprise and clean mobility programs for retail customers with the aforementioned criteria. By the end of 2021, SCB funded over 40.15 billion baht in financing to help mitigate climate change impact, reduce inequality and promote well-being

For more information about SCB Sustainable Finance programs and performance, please see SCB Sustainability Report 2021, Sustainable Finance chapter, page 40-48.

RISK MANAGEMENT

Approach to Identify, Assess and Manage Climate Related Risk

INTEGRATION OF CLIMATE CHANGE AND RISK MANAGEMENT FRAMEWORK

Climate change is identified as one of sustainability risks integrated into SCB risk management through a group-wide operational risk management, emerging risk management and credit risk management.

Operational risk management

SCB operational risk management process compiles and assesses different types of risk identified by all functions within SCB with support from SCB Risk Office. Each function will provide inputs to define potential key issues, prioritize key risks and develop risk management plan which include factors as a result from climate change as well as human rights violation. There were also knowledge sharing sessions with operational risk officers who have a responsibility to work with other functions within the Bank on human rights and climate change risks. This helps ensure those officers have up-to-date knowledge on those issues and able to identify and manage when carrying out the process throughout the Bank.

Emerging risk management

SCB conducts emerging risk assessment annually to identify key significant emerging risks that are expected to cause long-term impacts upon the Bank and to review its risk management plan in accordance with the identified risks: gradual downturn, interruptions of business, damage to assets as well as a decline in quality and quantity of natural resources, agricultural outputs, and commodity as the results from physical and transition risks from climate change. Accordingly, the Thai government is in the process of drafting a climate change act which will serve as key economic mechanism in driving the private sector to adopt long-term climate change implementations. Directed by this law, private and public companies are required to maintain and disclose greenhouse gas emission inventory and report reductions while integrating climate change risks as part of corporate planning or initiatives, consequently impacting change in asset value in certain industries.

Besides, climate change poses credit risk and financial risk to SCB through portfolio exposures to business that experiences acute and chronic natural phenomena caused by climate change. This causes business interruptions and harms clients' productivity and performance, affecting their ability to meet financial obligation. To tackle this, regulatory changes will also be enforced to reshape the way companies do business. During a transition towards low-carbon economy, carbon-intensive industry will lose their competitiveness because of governments' measures or large corporates' initiative leading to limited opportunities for the Bank to provide financial product to support the client's business growth. Clients in carbon-intensive sectors will need to invest in new tools or technologies or bear additional costs of the transition, distressing financial performance and credit quality. This also presents a business opportunity should the Bank maintain continuous dialogue with clients.

Credit risk management

Credit risk management is one of, if not the most critical areas in banking business. Without proper climate change risks management in credit process, it could result in financial, reputational or even regulatory risk to the Bank as such changes could directly and

indirectly affect clients' business activities. SCB has long experience in providing financial support for a large infrastructure and power projects which could be affected from physical climate change risk. To mitigate such risk, the Bank relies on experience of credit analysts and utilizing external expert's recommendations to identify potential risks and assess whether the management plan in place is sufficient. SCB is working to integrate climate change as well as other ESG considerations into credit process in accordance with international standards. This initiative seeks to formalize SCB approach towards climate related risk and ensure that knowledge management is maintained within the organization.

In parallel, throughout 2021, SCB has revamped its internal credit process by adopting the Equator Principles (EP), a set of globally accepted standards on environmental and social management for any projects with value over 50M USD. Guided by the Equator Principles, projects are required to perform climate risks assessment, determining whether the existing mitigation measures are sufficient to manage potential risks.

For all large-scale projects with potential significant environmental and social impact, physical risks of climate change must be assessed. For project with high emission of greenhouse gas, assessment on transition risk has to be also assessed to inform the Bank's decision making to support the Project. By the end of January 2022, SCB is an official member of the EP Association.

The Bank believes that improvements to its credit process through the implementation of

EPs does not only assist its clients in systematically managing environmental and social impacts resulting from the project but also benefits the Bank by putting in place a mechanism for cooperation with independent environmental and social issues assessment experts while helping to identify subsequent mitigation measures and monitoring its implementation as specified in lending covenants.

For more information about SCB's implementation of the Equator Principles, please see 2021 SCB Sustainability Report, page 20-23.

Understanding financed emissions

To better understand our emissions resulting from provisions of financial supports to clients (Scope 3, financed emissions), In early 2022, SCB became a member of the Partnership for Carbon Accounting Financials (PCAF), adopting their Global GHG Accounting and Reporting Standard for the Financial Industry to assesses our greenhouse gas emission relating to our products and services. Below is SCB's GHG accounting report for scopes 1, 2, and 3.

SCB GHG Accounting Report 2021

Overview

Scopes and categories	FY 2019	FY 2020	FY 2021
Scope 1 emissions			
Total scope 1	11,081	9,629	7,588
Scope 2 emissions			
Total scope 2	17,767	13,218	11,154
Upstream scope 3 emissions			
Financed Emission	115,524	128,719	156,159
Financed Emission Intensity	7.08	6.34	7.35
Business Travel	14,167	9,714	7,714
Purchased goods and service	-	280	127
Total emissions all scopes			
Scope 1 total emissions	11,081	9,629	7,588
Scope 2 total emissions	17,767	13,218	11,139
Scope 3 total emissions	129,691	138,713	164,000
Overall total emissions	**158,539**	**161,560**	**182,727**

Absolute financed emissions (scope 3)

Activity	Percentage of total loans/ investment	Scope 1 and 2 emissions (tCO2e)	Scope 3 emissions (tCO2eq)	Emission intensity (Carbon Footprint, unit: ton GHG per Million USD financing and investment)	Weighted data quality score (High 1: Low 5)
Absolute emissions per asset class					
Corporate loans	30%	89,413	10,333	6	4
Project finance		52,521	0	16	4
Listed equity		3,864	0	97	4
Corporate bond		28	0	2	4
Total		**156,159**	**10,333**	**-**	**-**
Absolute emissions per sector					
Electricity, gas, steam, and air conditioning supply	N/A	82,734	-	N/A	4
Manufacturing		4,803	10,333		4
Others		1,876	-		4
Total		**89,413**	**10,333**		-

Remark:

- The total exposure/coverage is based on on-balance sheet asset/products (loan portfolio and investment).
- All the reported emissions are from projects and activities located in Southeast Asian region.
- As of 2021, carbon emissions of our asset portfolio were calculated based on the methodology of PCAF. Only those assets, for which carbon emissions data could be retrieved, were included in the calculation presented above. At the moment, the calculation excludes unlisted equity, commercial real estate, mortgages, and motor vehicle loans, as specified by the Global GHG Accounting and Reporting Standard developed by Partnership for Carbon Accounting Financials (PCAF).
- The reported scope 3 financed emissions include only emissions from energy (oil and gas) and mining sector.

METRICS AND TARGETS

Climate related metrics and targets

Contributing to collaborative efforts across industry sectors to limit and maintain a rise in average global temperature to well below 1.5°C in accordance with the Paris Agreement. SCBX Public Company Limited, (a holding company and a major shareholder of SCB) has set net zero emissions target base year in 2021, achieving net zero within its own operations by 2030, and in investments and lending in 2050.

Supporting SCBX's commitments and aligning with the Bank's Corporate Sustainability Framework, SCB has similarly set climate related targets and metrics as follow.

Boundary	Metrics	3-Year (2023) Target	2021 performance
Operations	Scope 2 GHG emissions reduction	Reduce 10% of GHGs emission in ton CO_{2eq} (Scope 2) resulted from electricity consumption at main buildings (against 2019 baseline).	Achieved 37% reduction of GHG emissions (Scope 2)
Lending and investment	Sustainable finance products	Fund and raise 53,000 million THB of sustainable finance	Funded over 40.15 billion THB in financing

SCOPE 2 GHG EMISSION REDUCTION

SCB has maintained continuous reduction in Scope 2 GHG emissions through the Bank's energy efficiency program which includes the installations of energy efficient lightbulbs in main building, adjustment of elevators programming, and HVAC system. In addition, cooling towers have been replaced to be more energy efficient resulting in a significant reduction of electricity consumption in 2020. However, the reported data might not accurately reflect the actual power consumption portfolio due to a limited use of SCB's office building space during the period of pandemic. Therefore, SCB will consider revising the previously identified target in alignment with a new business approach as well as to a recently announced net zero commitment.

GHG emissions	Unit	2019	2020	2021
Scope 2 emissions	Ton CO_{2eq}	17,767	13,218	11,541

Case study: Holistic energy management

2021 was a challenging year due to the COVID-19 pandemic, forcing SCB along with other business to restrict its physical operations. However, SCB saw this as an opportunity to continue the Bank's energy efficiency program having replaced cooling towers in 2020. In 2021, the Bank invested resources in studying and making adjustments on facility operation and motivating behavioral, including reducing operating hour of the chillers, adjusting set point of the chiller, adjusting the temperature within the working space, reducing unnecessary lighting in parking space. This effort resulted in a significant saving of over 6,133,884 kWh electricity, which equals to 2,355 tons of CO2eq GHGs emission reduction. The electricity cost saving was approximately at 23 million THB. For more information about SCB operational eco-efficiency initiatives, please see SCB Sustainability Report 2021, Environmental Footprint Reduction chapter.

For GHG scope 3 emissions, SCB keeps track of relevant GHG emissions including GHG emission from investment (156,159 tons of CO_{2eq}), business travel (7,714 tons of CO_{2eq}) and purchased water supply (127 tons of CO_{2eq}).

SUSTAINABLE FINANCE PRODUCTS

SCB continues to support a transition to a low-carbon economy through providing financial support to projects such as renewable energy generation, development of mass transit by rail. In 2021, SCB mobilized more than 38,000 million THB to support low-carbon and green projects and activities such as solar farm. Those projects could help reduce GHGs of more than 600 MW which could be more than 16 million tons CO_{2eq} per year. In addition, SCB also supports clients in issuing green bond in line with International Capital Market Association (ICMA) with the SCB's portion over 7,000 million THB.

Moreover, SCB also helped Small and Medium Size Enterprise (SMEs) to transform their businesses and operations to become more environmentally friendly. In 2021, more than 6,000 million THB was mobilized to support SMEs under a SME GO GREEN product program. For retail customers, SCB has in place a green loan scheme to support customers to purchase EV and plugged-in hybrid vehicles, green home, as well as general sustainable loan for sSME, accounting for more than 4,150 million THB loan provided.

For more information about SCB Sustainable Finance programs and performance, please see SCB Sustainability Report 2021, Sustainable Finance chapter, page 45-48.