SCBX GROUP CLIMATE CHANGE RISK ASSESSMENT AND ADAPTATION

A PROGRESS REPORT OF TASKFORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD) RECOMMENDATIONS IMPLEMENTATION

July 2023

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SCBX GROUP IS COMMITTED TO
BECOMING A FINANCIAL TECHNOLOGY
COMPANY THAT ACHIEVES ITS
NET ZERO COMMITMENT IN 2050.

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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 levels 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.

These natural phenomena consequently impact company operations. Should the company neglect 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.

SCBX Group recognizes the importance of having in place climate change mitigation and adaptation measures for both the Group and society. Therefore, the Group, in its beginning stage through Siam Commercial Bank (SCB), SCBX Group has initiated and integrated considerations of climate change risks and opportunities management as part of business activities and operations.

This report intends to communicate SCBX Group management approach and progress in alignment with the disclosure requirement of the Taskforce on Climate-related Disclosure (TCFD) Recommendations Implementations.

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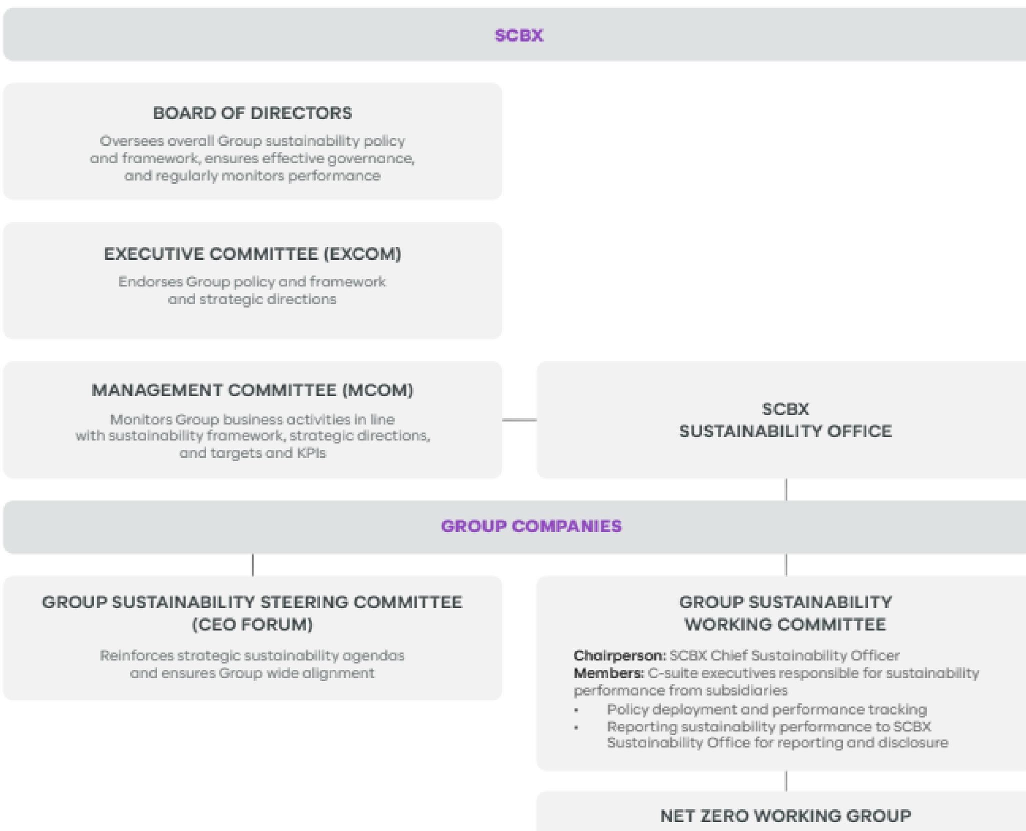
[1] Allen, M.R., O.P. Dube, W. Solecki, F. Aragón-Durand, W. Cramer, S. Humphreys, M. Kainuma, J. Kala, N. Mahowald, Y. Mulugetta, R. Perez, M. Wairiu, and K. Zickfeld, 2018: Framing and Context. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial 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

SCBX GOVERNANCE ON CLIMATE-RELATED RISKS AND OPPORTUNITIES

SCBX Group continues its efforts on managing risks and opportunities associated with climate change by announcing commitments and putting in place management approaches through deployment of relevant corporate policies including SCBX Sustainability Policy, SCBX Climate Change and Environmental Stewardship Policy, reinforced by the sustainability governance structure at the Group level which is tasked with roles and responsibilities from the Board of Directors to subsidiaries in order to embed sustainability mindset and practices as part of SCBX Group culture and work process.



To strengthen alignment with the long-term sustainability performance, SCBX has performance identified indicators tied to climate change mitigation and adaptation, from declaring Group-wide commitments towards Net Zero to having specific targets for sustainable finance and green investment, while aspired to dedicate a team to pursue business opportunities in climate technologies.

STRATEGY

STRATEGY TO ADDRESS CLIMATE CHANGE IMPACTS

'Reaching Climate Neutrality' is identified as one of the four sustainability strategic goals of SCBX Sustainability Framework. Therefore, SCBX, through Siam Commercial Bank (SCB), as a main subsidiary of the Group, 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 and offer products and services that incentivize climate change adaption in order to create balance between risk management and business opportunities, while at the same time supporting Thailand's transition to a low-carbon society.

CLIMATE CHANGE RISK

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

Transition 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. SCB conducted climate change risk assessment with the support from external expert to identify potential impact from current and future regulatory and legal case on early policy, late policy and/ or no policy deployment on the sector likely to be most affected.

Therefore, SCB, the banking business arm of SCBX develops Fossil Fuel statement to ensure the bank portfolio is not going in opposite direction with the net zero commitment. This is to gradually shift 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 10% of the Bank's power plant portfolio, smaller than renewable energy and transitional energy.

Physical Risk

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.

SCB conducted climate change risk assessment with the support from external expert for acute physical risk in operation as well as corporate lending portfolio to identify possible impact within the short-term (0-3 years), medium term (3-6 years) and longer term (>6 year). The result indicated that with the current control measures in place, the impact is likely not going to be material within the next 20 years. Recognizant of the importance of taking part in mitigating impacts resulting from climate change, which is a global issue, SCBX, through 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.

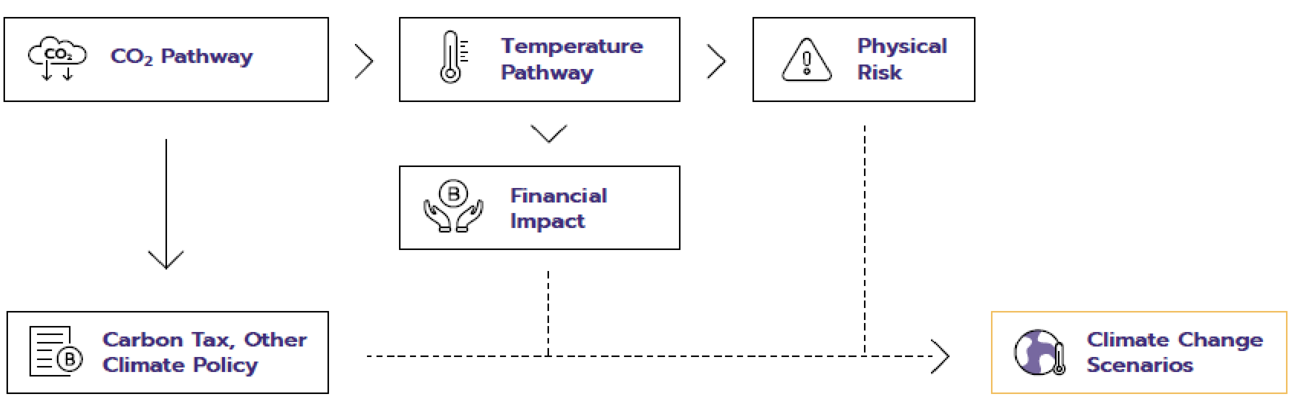
Similarly, SCB also assesses potential impact of physical climate change risks upon client's operations in oil and gas sector which the Bank defines as a sector highly exposed to climate change risks. Extreme weather, including more intense cyclones and extreme rainfall, could disrupt the client's operations. 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, physical risk and transition risk of are inherently 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.

SCBX define the scenario which the physical and transition risks on our existing and new operations in the timeframe of medium and long term. The SBTi net zero target and roadmap is defined to minimize financial risk as well as reputational risk from our own operation as well as identify possibility to avoid physical risks such as the impact on channels of customer access to banking services as well as service reliability in the case of natural disaster. Therefore, the future system as well as none-critical system will be migrated to be on world-class cloud service provider to ensure stability of the digital services.

CLIMATE CHANGE SCENARIO ANALYSIS

In 2020, SCBX, through SCB, worked with Moody's Analytics 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.



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 utilizes 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 identifies 2.2 million tons of scope I and scope II emissions. 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

SCBX Group sees climate change adaptation as one of the most significant aspect which needs to be addressed because of risk assessment exercise even it might not be in a short-term. Accordingly, the Group implements its efforts on climate change adaptation through endeavor into climate tech and credit risk management by strategically migrate data and digital ecosystem onto a professional cloud service providers to ensure that the stability and reliability of the services will be maintained in case of natural disaster and any kind of disturbance. In addition, SCBX's net zero roadmap for operational GHG emissions which is ahead of Thailand's commitment is expecting to reduce SCBX's risk profile on potential impact from regulatory risks which are expecting to be more stringent.

Climate Tech

SCBX Group has already committed to reaching Net Zero in our own operations by 2030, and in our lending and investment activities by 2050. These are bold and aggressive commitments, and we are determined to achieve them. However, the ultimate ambition is not only our own transition to Net Zero. It is instead to build Climate Tech as a new growth engine, offering technology services to help customers in their Net Zero journey, along with financing support, thereby creating a unique value proposition. These could include carbon measurement, tracking, and reporting solutions, carbon exchange platforms, and green mobility. Further business opportunities will evolve around EV subscription platform where Climate Tech is linked with our existing digital platform.

To understand the market and investment landscape before making significant investment, SCBX has committed initial investment capital in reputable climate tech investment funds and is the process of setting up dedicated domain to pursue this opportunity.

Credit Risk Management

In order to prepare for potential physical impacts from climate change, SCBX, through SCB, 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. 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 per ton (based on the cost of 20 USD) and 100 THB per ton on investment opportunity (i.e. shadow pricing) on GHGs saving from electricity usage (i.e., Scope II) to evaluate energy efficiency and understand low carbon investment within the Bank and define net zero initiatives on the SCB HQ. At the same time, SCBX is the process of designing the internal carbon pricing which initially will be launched at a limited scale in order to test internal carbon fee concept, and in return, collect potential fund to support green initiative.

CLIMATE-RELATED OPPORTUNITIES

SCBX Group, through SCB, recognizes potential presented by global collaboration in addressing climate change, particularly through the implementation of national policies such as the Alternative Energy Development Plan: AEDP2018 (2018 - 2037), Thailand Transportation Development Framework, and National Electric Vehicle Policy Committee Plan. To demonstrate our commitment and capitalize on emerging opportunities, SCB established Sustainable Financing for the Corporate Segment, a dedicated financial solution that supports green businesses. This encompasses alternative power generation, such as clean power plants, the electric vehicle ecosystem, and other climate change adaptation initiatives, such as investments in solar energy to promote energy efficiency with a commitment to allocating an additional 100 billion by 2030 baht toward green finance in accordance with the Bank's ESG intention for sustainability. This aligns with SCBX Group's commitment to set aside a credit line of 200 billion baht by 2030 for lending to businesses or projects seeking to focus on reducing greenhouse gas emissions.

At the same time, not only in terms of financial opportunities through sustainable financing that SCB realizes, at SCBX, it is also the Group's direction to pursue business opportunities in climate technologies area where we identified such as one of the five strategic pillars. SCBX is in the process of setting up business model and operations within the company to effectively pursue this opportunity.

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 SCBX Group's risk management through a group-wide operational risk management, emerging risk management and credit risk management.

Operational risk management

SCBX, through SCB, the 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.

Management of Emerging Risks

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. SCBX Group, through 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, since 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.

UNDERSTANDING FINANCED EMISSIONS

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

SCB Greenhouse Gases Accounting Report 2022

Overview

Scopes and categories	FY 2020	FY 2021	FY 2022
Scope 1 emissions			
Total scope 1	10,027	8,039	10,742
Scope 2 emissions			
Total scope 2	48,678	42,430	43,151
Upstream scope 3 emissions			
Financed emission	8,734,153	8,914,086	9,086,048
Financed emission Intensity	-	-	609
Business travel	116	155	326
Purchased goods and service	30,103	30,312	34,636
Office Waste (Paper)	3,548	2,606	2,379
Total scope 3	8,767,920	8,947,159	9,123,389
Total emissions all scopes			
Scope 1 total emissions	10,027	8,039	10,742
Scope 2 total emissions	48,678	42,430	43,151
Scope 3 total emissions	8,767,920	8,947,159	9,123,389
Overall total emissions	**8,826,625**	**8,997,628**	**9,177,282**

Remark:

- The previously reported data on total direct greenhouse gas emissions (GHG scope 1) and total indirect greenhouse gas emissions (GHG scope 2) (2019-2021) were revised due to a change of reporting scope to include data from SCB branch network where SCB has operational control over. The emission factor was also revised to align with that of TGO.
- For upstream scope 3 emissions, the data was revised because due to an improved process based on a recommendation from the third-party in reviewing of data collection, review, and emission factors.

Financed Emissions (Scope 3) as of 2022

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	19%	6,049,966	18,194	294	4
Project finance	4%	3,033,385	0	238	4
Listed equity	<1%	2,670	0	142	4
Corporate bond	<1%	28	0	3	4
Total	-	9,086,048	18,194	609	4
Absolute emissions per sector					
Electricity, gas, steam, and air conditioning supply	N/A	5,631,818	N/A	N/A	4
Manufacturing		265,039	9,912	N/A	4
Others		153,109	8,282	N/A	4
Total		6,049,966	18,194	N/A	4

Remark:
- The total exposure/coverage is based on on-balance sheet asset/products (loan portfolio and investment).
- As of 2022 carbon emissions from our asset portfolio were calculated based on the Global GHG Accounting and Reporting Standard developed by Partnership for Carbon Accounting Financials (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.
- All the reported emissions are from projects and activities located in Thailand, Lao PDR, and Vietnam.

METRICS AND TARGETS

Climate related metrics and targets

Contributing to collaborative efforts across industries to limit and maintain a rise in average global temperature below 1.5°C in accordance with the Paris Agreement. SCBX commits to reduce Scope 1 and 2 emissions 90% by 2030 from a 2022 base year, and to achieve net zero in investments and lending activities in 2050 with the following supporting metrics and targets to support a transition to a low carbon economy. Our identified targets are aligned with the Science-based Target initiative (SBTi).

Boundary	Metrics	Target
Operations	Scope I and II GHG emissions reduction	Reduce 90% of GHGs emission in ton CO_{2eq} by 2030 (against 2022 baseline)
Products and Services	Sustainable finance	Set aside a credit line of 200 billion baht by 2030 for lending to businesses or projects seeking to focus on reducing greenhouse gas emissions

SCOPE II GHG EMISSION REDUCTION

SCBX Group has maintained consistent reduction in Scope II GHG emissions through energy efficiency program which includes the HVAC configuration, adjustment of elevators programming and working hour arrangement. However, Scope II GHG emissions was increasing in 2022 because of the 2021 was the year which COVID-19 pandemic took significant impact on how the group operated.

GHG emissions	Unit	2019	2020	2021	2022
Scope II emissions	Ton CO_{2eq}	59,025	48,678	42,430	43,151