

SCB<sup>x</sup>





# TABLE OF CONTENTS

1

## INTRODUCTION

---

2

## GOVERNANCE

04	Governance of Climate-related Risks and Opportunities
06	Uplifting Capabilities in Climate Risk and Opportunity Management

---

3

## STRATEGY

08	Climate-related Risk Analysis and Potential Impacts
10	Climate Scenario Analysis
11	Net Zero Strategy

---

4

## RISK MANAGEMENT

14	ESG Risk Management Approach
15	Response to Climate Change Risk
18	Credit Risk Management
19	Project Finance Risk Management in accordance with the Equator Principles
21	Risk Management in Fossil Fuel Financing

---

5

## METRICS AND TARGETS

---

24	Net Zero Operations
27	Net Zero Financed Emission

# 1 INTRODUCTION

## From Global Warming to the 'Global Boiling' Era

July 2023 witnessed the highest temperature in the world's history. On July 28, 2023, António Guterres, the Secretary-general of the United Nations (UN), declared that "The era of global warming has ended, and the era of global boiling has arrived." His warning highlights the unprecedented challenge and urgent need to tackle climate change, which will have far-reaching and unavoidable impacts on the economy, human livelihood, and biodiversity in the ecosystem.

Net Zero efforts are then inevitable and of great urgency; however, such endeavors must take the concept of 'Just Transition' into account while engaging collaboration from all stakeholders, including the government, financial institutions, and businesses - particularly the heavy-emitting industries such as the energy and electricity sectors.

This is to ensure a just transition and not causing subsequent economic and social impact. As the leading regional financial technology group, SCBX recognizes the unparalleled risks from climate change that could threaten business activities of subsidiaries within SCBX Group—especially the banking business—as well as our clients and business partners. We thus stay focused on overseeing and adapting to the physical and transition risks brought by the climate crisis.

At SCBX, assessing climate-related risks and opportunities towards net zero is not only an environmental commitment, but also our core strategy. In July 2022, SCBX Group announced the ambition to achieve net zero within own's operations by 2030 and net zero in lending and investments by 2050. SCBX aspires to manage climate risks and opportunities while taking part in global efforts to limit the world's average temperature rise to the Paris Agreement threshold of 1.5°C.



# 2 GOVERNANCE



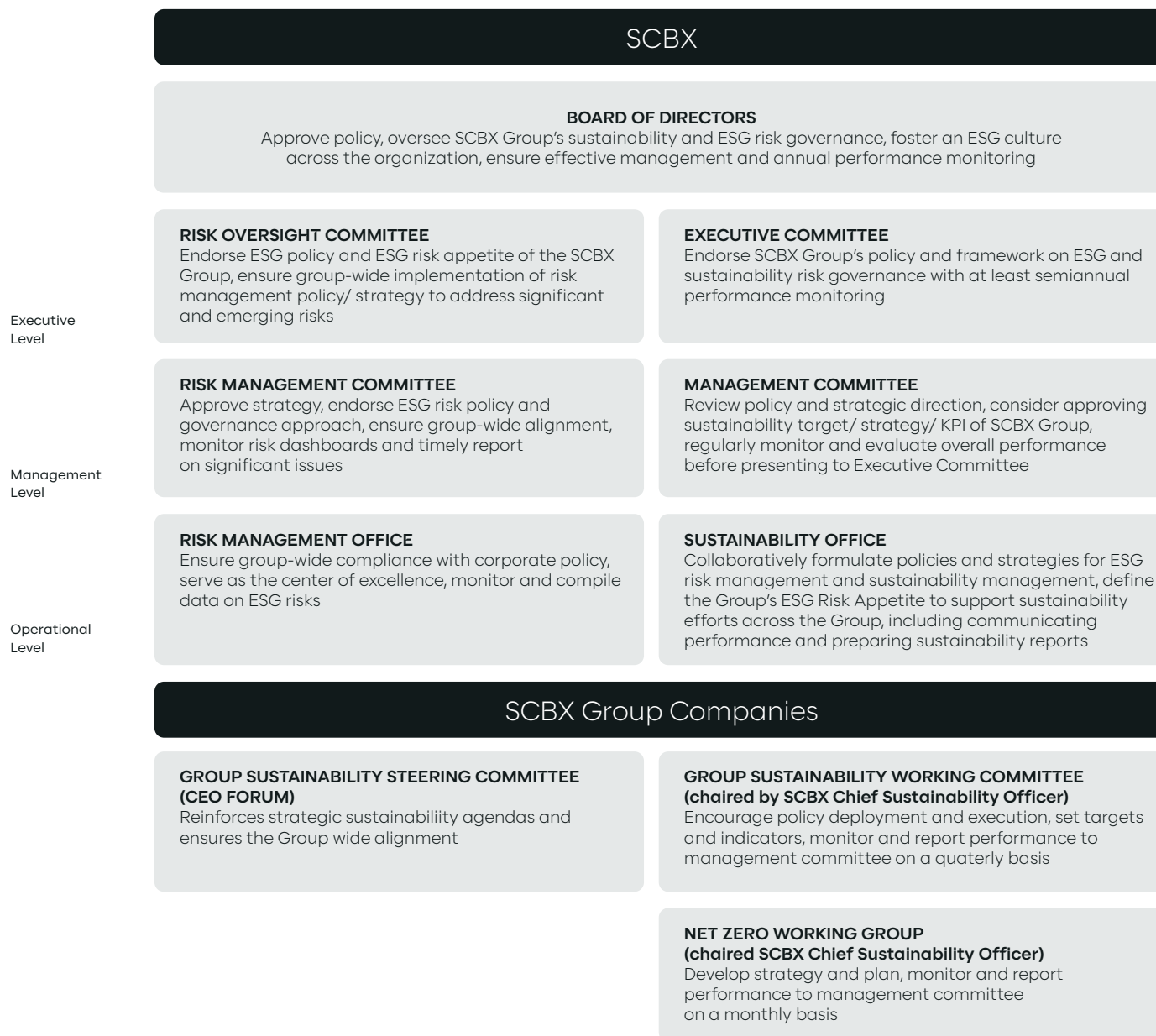
- 04 **Governance of Climate-related Risks and Opportunities**
- 06 **Uplifting Capabilities in Climate Risk and Opportunity Management**

## Governance of Climate-related Risks and Opportunities

SCBX establishes the governance structure of ESG and sustainability risks of SCBX Group, which encompasses climate change issues along with roles and responsibilities across the organization—from the board of directors to management and operational levels. Our goal is to ensure the systematic and consistent practices of ESG and sustainability risk governance within the SCBX Group, corresponding to the ESG Risk Management Framework and the SCBX Sustainability Policy and Strategic Framework. The Risk Oversight Committee and the Risk Management Committee of SCBX Group are responsible for reviewing and ensuring the adequacy and efficiency of ESG risk management strategy as well as ESG risk appetite at least once a year.

To strengthen alignment with the long-term sustainability performance, SCBX has included performance metrics in the corporate balance scorecard tied to climate change mitigation and adaptation, from aspirations towards emissions reduction towards Net Zero to having specific targets for sustainable finance and green investment, while aspired to pursue business opportunities in climate technologies.

## SCBX Group Governance Structure of Climate-related Risks and Opportunities



Key initiatives have been reviewed and approved per governance structure, roles and responsibilities of committees and working groups specified below.

## ESG Risk Management

Performance	Board of Directors	Risk Oversight Committee	Executive Committee	Risk Management Committee
SCBX Group ESG Risk Management Framework	●	●	-	●
SCBX Group ESG Risk Policy	●	●	-	●
SCBX Group ESG Risk Appetite and Key Risk Indicator	●	●	●	-

## Sustainability and Net Zero Management

Performance	Board of Directors	Executive Committee	Management Committee	Steering Committee	Working Committee	Net Zero Working Group
SCBX Group Sustainability Strategic Framework	●	●	●	●	●	-
SCBX Group Sustainability Governance Structure	●	●	●	●	●	-
SCBX Group Policy In Relation to Sustainability						
<ul style="list-style-type: none"> <li>▪ Sustainability Policy</li> <li>▪ Climate Change and Environmental Stewardship Policy</li> <li>▪ Human Rights Policy</li> <li>▪ Financial Inclusion Policy</li> </ul>	●	●	●	-	●	-
SCBX Group 2025 Sustainability and Net Zero Commitment	●	●	●	-	●	-
SCBX Group Operational Net Zero Roadmap and Guiding Principles	-	-	●	-	●	●
Net Zero Strategy and Sectoral Pathway to Decarbonize Greenhouse Gas Emissions from Lending and Investment, and Industry Level Plan	-	●	●	-	-	●

## Uplifting Capabilities in Climate Risk and Opportunity Management

Throughout 2023, SCBX Group invited all executives and employees to join training sessions on risks and opportunities arising from climate change and net zero transition. We aim to foster awareness and understanding across the organization with regard to climate challenges, accounting for financed emissions, target setting based upon the Science Based Targets initiative (SBTi), and net zero strategy implementation.

### Board of Directors

SCBX has invited external experts in policy and advocacy for climate change and environmental initiatives to share insights and perspectives on the risks and opportunities arising from climate change. This aims to share with the board's understandings of Thailand's and global climate change landscapes, elevating governance and management practices related to climate change mitigation and adaptation. The discussion covered adaptation and mitigation strategies aligned with the changing context and business operations of SCBX Group. A total of 14 board members participated in this special lecture.

### Executives and Employees

Month	Topic	Participant (persons)
March	Sustainability & Climate Action...the Need-to-Know Challenge and Business Opportunity of This Era	More than 500
June	Net Zero and Energy Efficiency Building	64
June	About: Partnership for Carbon Accounting Financials (PCAF)	59
August	Financed Emissions and Sustainable Finance	119
September	SCBX Net Zero Strategy -target Setting Approaches	33
September	Exploring Net Zero Opportunities: Green Building Site Visit for Sustainable Action	26
November	SCBX Net Zero Strategy - SDA Methodology	80
November	Setting Net Zero Target for Residential Mortgage and Commercial Real Estate Sector	More than 400

# 3 STRATEGY



- 08 **Climate-related Risk Analysis  
and Potential Impacts**
- 10 **Climate Scenario Analysis**
- 11 **Net Zero Strategy**









Despite emerging threats from climate change, effective risk assessment and governance can turn these challenges into business opportunities. With this in mind, SCBX performs the assessment of climate risks and opportunities to inform subsequent strategy and risk management approach.

## Climate-related Risk Analysis and Potential Impacts

SCBX has undertaken the analysis of climate-related risks - including transition and physical risks - based upon the business activity of Siam Commercial Bank (SCB) - SCBX Group's core business. The assessment outcome can be concluded as follows:

### Transition Risk

Types of Risks	Risk Driver	Potential Financial Impacts	SCB's Risk Exposures	Time Horizons
<p><b>Existing laws and regulations</b></p> <p><b>New laws and regulations</b></p> 	<ul style="list-style-type: none"> <li>Enforcement of existing laws and the development of new carbon regulations, including measures such as carbon taxes and restrictions on carbon emissions.</li> <li>Regulation and supervision of climate-related risks in the financial sector.</li> <li>Implementation of new standards or regulations to enhance the disclosure of climate-related information.</li> <li>Adherence to current rules and regulations governing goods and services.</li> </ul>	<ul style="list-style-type: none"> <li>Escalating operating costs, both direct and indirect, arising from aligning the strategic plan/business model with evolving laws and regulations.</li> <li>Increasing credit risk as customers may be impacted by regulatory changes domestically and internationally, affecting competitiveness and potentially leading to business disruption. This, in turn, can impact the customer's ability to meet debt obligations within the specified timeframe.</li> <li>The value of financial assets declines, accompanied by growing volatility of asset prices in market.</li> <li>Changes in relationships and correlations between market risk factors may occur, complicating market risk management.</li> </ul>	<ul style="list-style-type: none"> <li>Credit Risk</li> <li>Operational Risk</li> <li>Market Risk</li> </ul>	<p>Short-term</p> <p>Medium-term</p> <p>Long-term</p>
<p><b>Technology</b></p> 	<ul style="list-style-type: none"> <li>Replacing conventional goods and services with low-carbon alternatives.</li> <li>Investing in new technologies does not yield successful outcomes.</li> <li>Transitioning to technologies with lower GHG emissions.</li> </ul>	<ul style="list-style-type: none"> <li>Escalating operational expenses incurred in researching, developing, and/or adapting technologies aimed at lowering carbon emissions and promoting environmental sustainability.</li> <li>Customers that are unable to navigate technological shifts may lose competitive advantages, facing the obsolescence of assets that no longer contribute to business value which could impact their ability to repay debt and secure new capital sources.</li> <li>Potential decline in property value, assessment of financial assets, or evaluation of collateral held by the Bank.</li> </ul>	<p>Credit Risk</p>	<p>Short-term</p> <p>Medium-term</p> <p>Long-term</p>

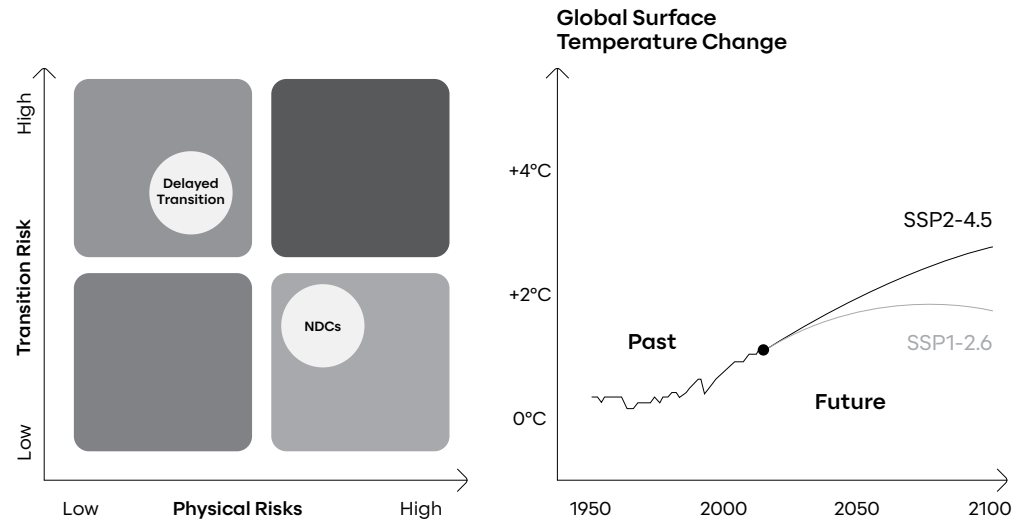
Types of Risks	Risk Driver	Potential Financial Impacts	SCB's Risk Exposures	Time Horizons
<b>Market</b> 	<ul style="list-style-type: none"> <li>Shifting consumer behavior.</li> <li>Uncertainty in market conditions.</li> <li>Rise in production costs.</li> </ul>	<ul style="list-style-type: none"> <li>Decreased operating cash flow resulting from a shift in demand away from products/services with a high carbon footprint or negative environmental impact toward those that are more environmentally friendly. This shift may impact the debtor's ability to repay debt and reduce access to new sources of capital.</li> <li>Escalation of operating costs incurred in the development and adaptation of environmentally friendly financial products and services.</li> <li>Amortization and impairment of products due to reduced market demand.</li> </ul>	Credit Risk	Short-term Medium-term Long-term
<b>Reputation</b> 	<ul style="list-style-type: none"> <li>Shifting in customer satisfaction.</li> <li>Elevated concerns or negative opinions among stakeholders.</li> <li>Adverse publicity resulting from supporting for projects or businesses with high greenhouse gas emissions or impacts on the ecosystem and environment.</li> </ul>	<ul style="list-style-type: none"> <li>Investors exhibiting a negative attitude or reduced confidence due to inadequate climate management. Accusations of greenwashing, if present, could lead to the withdrawal of investments, affecting operational outcomes and potentially impeding debt repayment.</li> </ul>	<ul style="list-style-type: none"> <li>Credit Risk</li> <li>Reputational Risk</li> </ul>	Short-term Medium-term Long-term
<b>Physical Risk</b>				
Types of Risks	Risk Driver	Potential Financial Impacts	SCB's Risk Exposures	Time Horizons
<b>Acute</b> 	<ul style="list-style-type: none"> <li>Increasing in frequency and severity of natural disasters such as storms, floods, and forest fires.</li> </ul>	<ul style="list-style-type: none"> <li>Disruption of business operations, impacting income.</li> <li>Escalation of business operating costs due to repairs, rehabilitation of damaged property, and compensation for employees affected by natural disasters.</li> <li>Rise in operating costs to prevent disasters from climate change.</li> <li>Property damage, deterioration, and a decrease in value.</li> </ul>	<ul style="list-style-type: none"> <li>Credit Risk</li> <li>Liquidity Risk</li> <li>Operational Risk</li> </ul>	Short-term
<b>Chronic</b> 	<ul style="list-style-type: none"> <li>Temperature rise, sea level rise, severe heatwaves, water shortages, etc.</li> </ul>			Medium-term Long-term

Note: Short term = 0-3 years, medium term = 3-6 years, and long term = more than 6 years.

## Climate Scenario Analysis

In order to understand climate risk and opportunity, SCBX employed multiple scenarios to assess climate risks both physical and transitional risks, and also to plan a future low carbon strategy.

### NGFS and Shared Socioeconomic Pathways (SSP) Scenario Employed by SCBX



The climate scenarios from the Network for Greening the Financial System (NGFS) include the Delayed Transition Scenario and Nationally Determined Contributions (NDCs) Scenario were used for transition risk assessment. This is to represent different ends of high physical risk and transition risk world to analyze impact from carbon pricing and a decline in Gross Domestic Product (GDP) as a result of those NGFS scenarios to our portfolio.

For physical damage and operation loss, SCBX used Shared Socioeconomic Pathways (SSP) Scenario of SSP1-2.6 and SSP2-4.5 for physical risk assessment based on locations of SCBX's key operations and the third-party's/ service providers' location according to three timeframes including short- (up to 2027), medium- (2028-2033) and long-term (2034-2050) to identify whether residual risks are acceptable.



## Net Zero Strategy

Corresponding to our net zero commitment and climate risk assessment outcomes, SCBX seeks to address risks and opportunities—both internally and across the value chain—and implements the strategy to minimize GHGs emissions as follows:

### » Supporting the Paris Agreement through 4 core strategies «



**Net Zero in own's operations by 2030**

**Net Zero in lending and investment activities by 2050**



# 1

### Become a Net Zero Fintech

- Build Mindset
- Adopting new technology or smart building
- Transforming to Electric Vehicles
- Sourcing electricity from renewable sources



# 2

### Empower Customers through transformation

By 2030, allocating Baht 200,000 million to business and projects that seek to mitigate or adapt to climate change



# 3

### Support the technology ecosystem of the future

Investin global funds and companies with a focus on Climate Tech with an initial investment of USD 200 million



# 4

### Increase transparency through adoption of international standards



## Climate Mitigation

### By enhancing management and internal carbon pricing

With an ambition to 'Become a Net Zero Fintech,' SCBX places great emphasis on alleviating environmental impacts from the SCBX Group's business activities. Major approaches include:



**Low-carbon Building**  
Enhance energy efficiency, adopt eco-friendly air conditioners, and opt for highly efficient machinery and equipment



**Renewable Energy**  
Install solar panels and procure renewable power through market mechanism



**Electric Vehicle**  
100% adoption of electric vehicle by 2028



**Green Procurement**  
Procure eco-friendly products and incorporate environmental criteria into supplier selection

SCBX also conducts a Carbon Pricing Analysis for internal operations to gauge potential GHG emissions from electricity consumption, evaluate energy efficiency, and better understand the benefits from investments in low-carbon activities—all of which will contribute to net-zero initiatives for our head office buildings. The analysis assumes an estimated carbon price of Baht 650 per ton (derived from the cost at USD 20) and an investment opportunity (such as shadow price) of Baht 100 per ton. The Internal Carbon Pricing mechanism is also underway. SCBX plans to perform a pilot on some selected departments in order to examine the impacts of imposing a carbon fee and reinvesting the collected amount into future green initiatives.

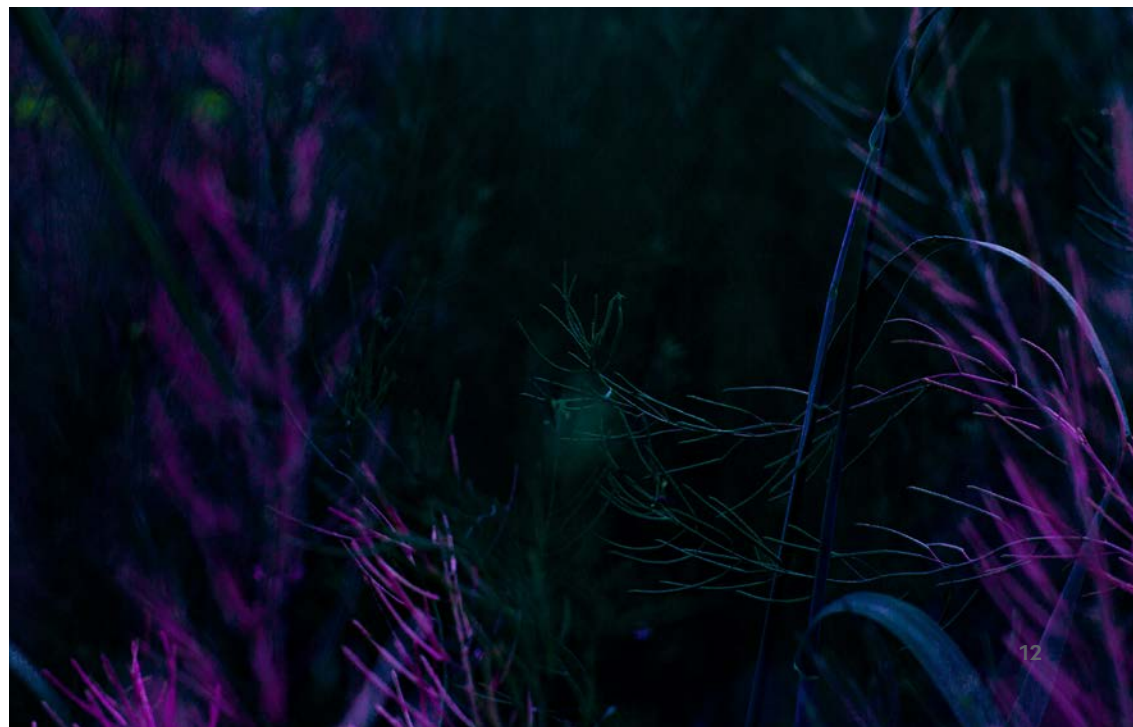
The efforts are part of SCBX's commitment to attain the medium-term goal of minimizing GHGs emissions from own operations by 50% by 2027 and the long-term goal of net zero emissions by 2030.

## Climate Adaptation

### By promoting green finance and investing in climate technology

SCBX Group, by SCB, recognizes the importance of collaborative efforts in addressing climate challenges—particularly Thailand's contribution to the Alternative Energy Development Plan 2018-2037 (AEDP2018) and the initiatives of the National Electric Vehicle Policy Committee. The Bank has identified 'Sustainable Finance' as one of its pillars for sustainable growth and strategic vehicle to 'empower clients on their transition journey. By 2025, SCB aims to allocate Baht 100,000 million to promote financial solutions for green businesses or activities—such as electricity generation from renewable sources, EV ecosystem development, and investments in solar power to enhance energy efficiency. Today, the Bank offers a wide array of green financial products and services that are tailored to corporate clients and retail customers.

Furthermore, to seize an opportunity in climate technology, SCBX launched the strategy to 'Nurture Ecosystem of the Future' and identifies 'Climate Tech' as one of the five core businesses that could drive new growth for SCBX Group, investing in and developing solutions for climate-related risk management—from measuring, monitoring, and reporting carbon inventory to carbon markets and EV subscription platforms.



# 4 RISK MANAGEMENT

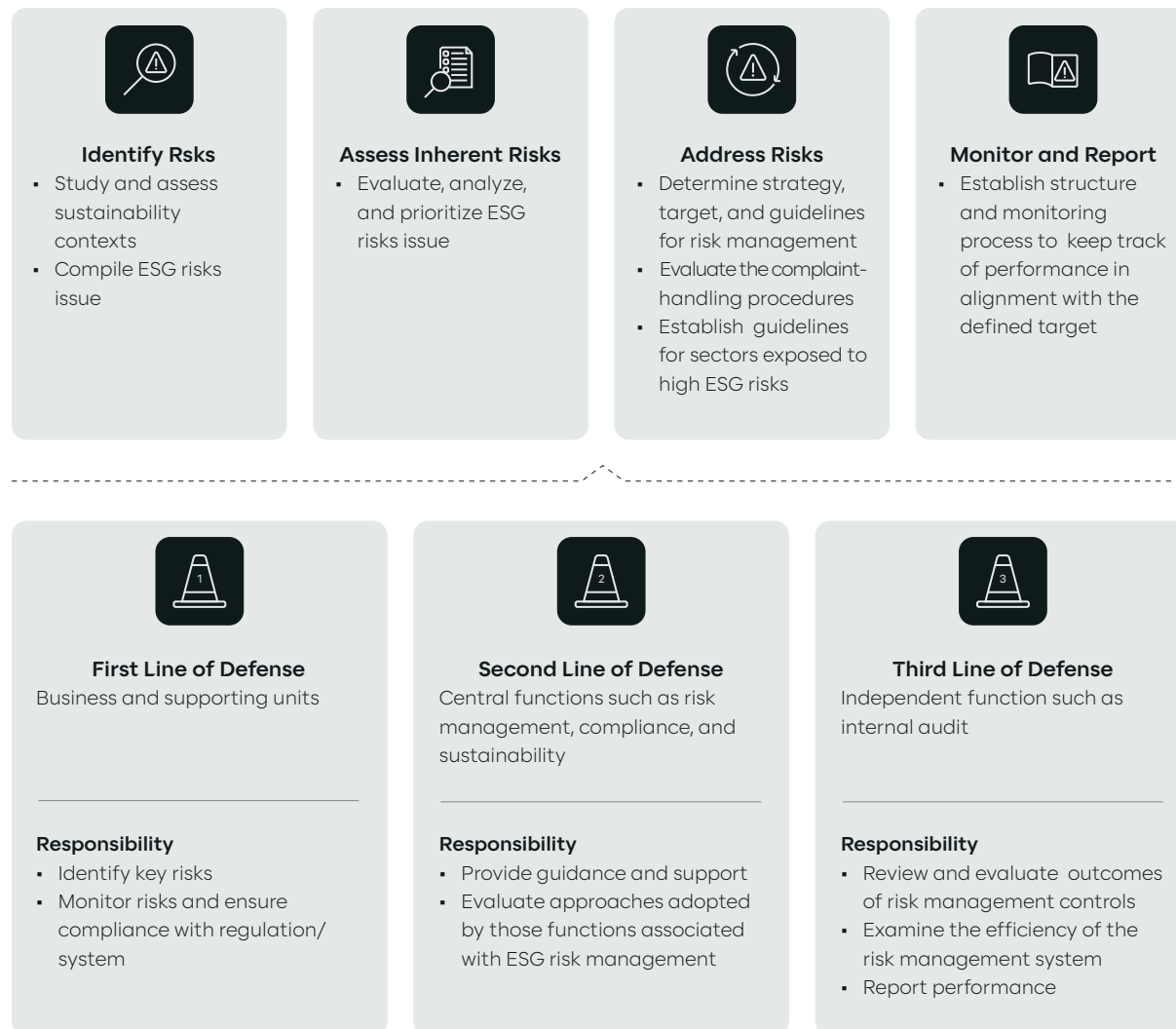


- 14 ESG Risk Management Approach
- 15 Response to Climate Change Risk
- 18 Credit Risk Management
- 19 Project Finance Risk Management  
in accordance with the Equator  
Principles
- 21 Risk Management in Fossil Fuel  
Financing

## SCBX Group's ESG Risk Management Approach

Climate change is among the top ESG risks for SCBX Group, given its substantial and multiple impacts on both SCBX's subsidiaries, clients' business and throughout the value chain.

In 2023, SCBX reviewed the Group Risk Management policy by incorporating the framework for managing ESG risks as part of the policy and developed the Group ESG Risk Management Policy. This policy and framework specify that climate change is an important ESG issue, mandating subsidiaries within the Group to integrate ESG risks and climate change into their risk management processes following the principles of control, supervision, and audit, or the 'Three Lines of Defense' approach. Furthermore, acceptable levels of ESG risk have been defined where SCBX Group will avoid providing financial support to businesses and activities that hinder SCBX Group from achieving its net-zero aspiration by 2050. Moreover, a SCBX Group Climate Change and Environmental Stewardship Policy has been announced to provide guidance and ensure that the Group is managing ESG risks and climate change appropriately and effectively.

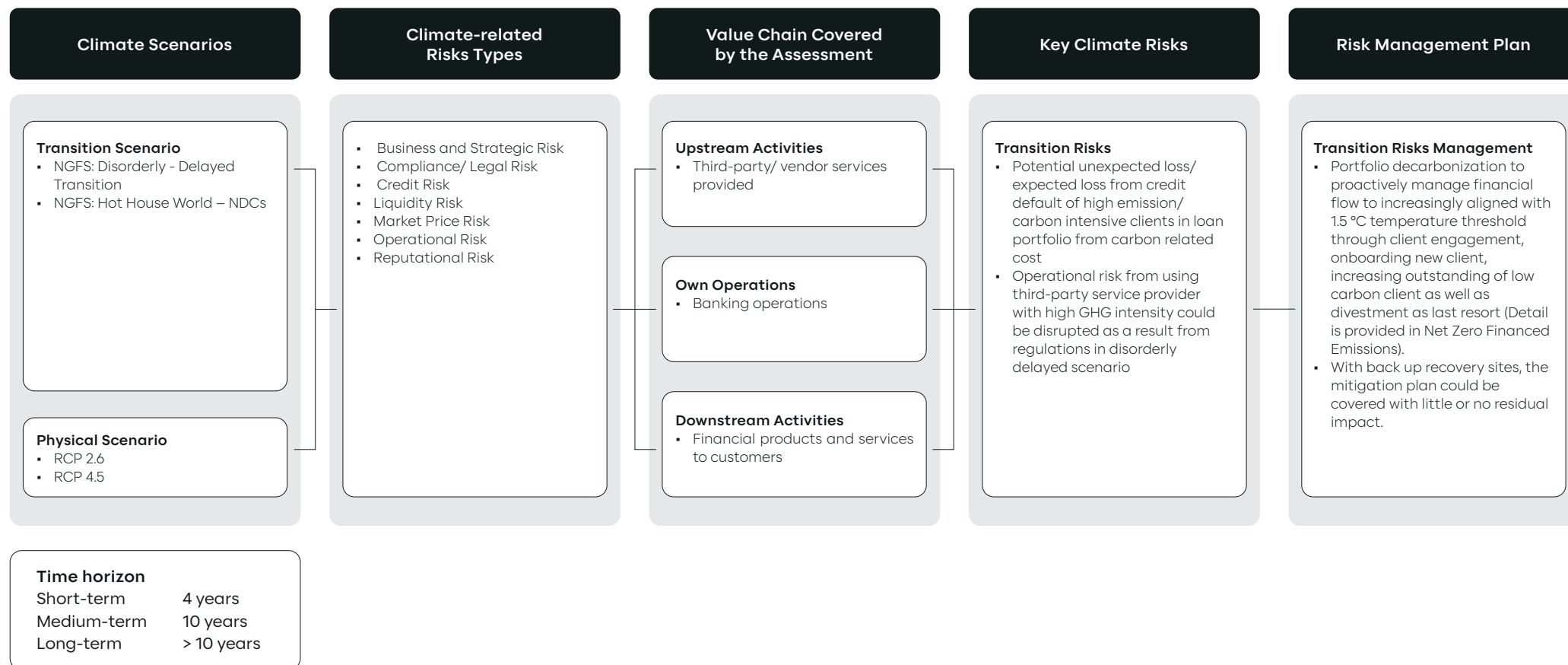


## Response to Climate Change Risk

### Transition Risks

In 2023, SCBX acquires external climate risk expert to help define approach and develop tools for climate risk management in accordance with the TCFD's recommendations. The objective of this process is to provide a cornerstone for ESG risk management across the Group to foster continuous improvement rather than to define a precise impact of climate change risk in which there are still data gap and climate model specific to Thailand. A series of workshops were organized to aligned understanding on climate related risks relevant to companies within SCBX Group, which account for about 99% of the Group's consolidated revenue. The assessments were done by representatives from those companies using the tool and methodology provided to assess both transition and physical risk in accordance with selected climate scenarios. For both transition and physical risks, 7 types of climate related risks were assessed, i.e., business and strategic risk (inc. technology aspect), compliance / legal risk, credit risk, liquidity risk, market price risk, operational risk and reputational risk. For physical risk, both acute and chronic risks were considered. Unexpected loss and expected loss were defined for each risk for both before and after mitigation measure were put in place. Key assumptions are provided in 'Notes on Methodology' on page 39.

Transition Risk Assessment Framework of SCBX and material transition risks





## Physical Risks and Adaptation Plan

In 2023, the data from the Copernicus Climate Change Centre shows that the world endured 12 consecutive months with global warming of 1.5°C above pre-industrial levels. Therefore, the scenario of more frequent and severe extreme weather should be applied.

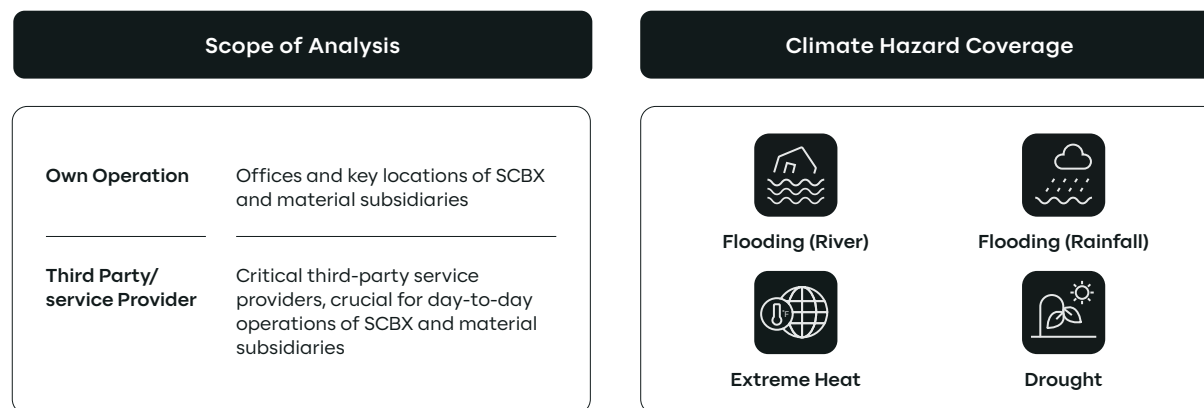
Therefore, SCBX with support from external climate expert, conducted physical climate risk assessment using Shared Socioeconomic Pathways (SSP) Scenario of SSP1-2.6 and SSP2-4.5 from IPCC Sixth Assessment Report which has more complete dataset in a region where majority of SCBX's operations are located in. The time horizons included in this assessment are 2027, 2033 and 2050. The climate hazard coverage includes flooding from river, flooding from rainfall, extreme heat and drought.





For the first scenario applied, the SSP1-2.6 is a scenario in which global CO<sub>2</sub> emissions declined significantly, however, not quickly enough to reach net zero within 2050. This scenario represents an optimistic view with caution that the world is moving aggressively toward net zero even though it might not be fast enough to meet the global deadline. This scenario provides minimal challenges to companies in forming mitigation and adaptation measures.

For the second scenario applied, the SSP2-4.5 scenario is "Middle of the Road" scenario in which CO<sub>2</sub> emissions are approximately the same as the current levels before starting to decline around mid-century, however, still do not reach net-zero by 2100. The temperatures rise is expected to be about 2.7°C by the end of the century. This scenario represents a less dramatic change when compared to the current stage while realistically providing potential impacts. This scenario provides a moderate level of challenge to companies to come up with mitigation and adaptation measures.

Accordingly, the physical risk and adaptation plan were reviewed for the location of the core banking operations and systems of SCB, a main subsidiary contributing the more than 82% of the Group's consolidated revenue. Interruptions to the core banking systems could cause significant impacts to the Bank both in terms of operational and reputational loss. Input data at asset level of key operations and third-party service providers include geolocation, asset built data and asset valuation are fed into the model and predict business interruptions in the number of days that the Bank could not conduct business as well as the Value-at-Risk of physical loss and operational loss.

### Physical Risk Assessment Framework of SCBX



Climate Hazard	Description
 <p><b>Rainfall Flood</b></p>	Rainfall flood refers to inundation resulting from rainfall, elevation and climate change. Flood depths are derived from flood models, river bathymetry, and extreme rainfall events. Intense precipitation may bring rainfall floods that result in physical damages to assets or temporary facility closures.
 <p><b>Riverine Flood</b></p>	River flood refers to inundation resulting from overflows from a river channel. This may result in physical damage to assets and business interruption.
 <p><b>Drought</b></p>	Drought is a prolonged absence or marked deficiency of precipitation or dry weather which results in water shortage or a hydrological imbalance.
 <p><b>Extreme Heat</b></p>	Extreme heat is experienced when humidity and temperature are high for a prolonged period. Prolonged extreme heat conditions may lead to undesirable effects on health and well-being, productivity losses and increased energy consumption.

IPCC-aligned Climate Scenario

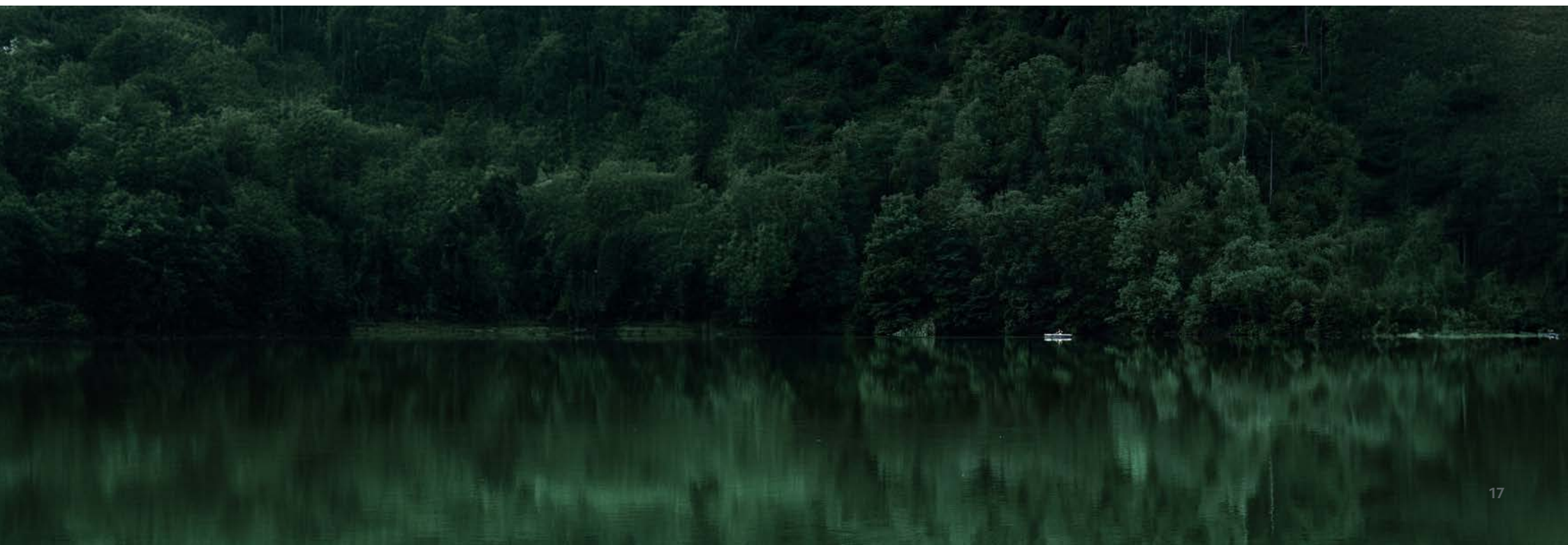
Time Horizons

RCPs	2.6, 4.5
SSPs	1-2.6, 2-4.5

Short	2027
Medium	2033
Long	2050

SSP Scenarios	Summary	Range of Global Mean Temperature increase by 2100
SSP1- Sustainability (SSP1-2.6)	Low challenges to mitigation and adaptation	1.3-2.4 degree (low emissions scenario, reaching net zero after 2050 keeping warming <b>below 2°C</b> )
SSP1- Middle of the Road (SSP2-4.5)	Medium challenges to mitigation and adaptation	2.1-3.5 degrees (intermediate scenario where emissions stay around current level until 2050, then fall but do not reach net zero by 2100. Expect to result in warming of <b>more than 2°C</b> )

The result indicates that Value-at-Risk of physical loss and operational loss are below materiality level considering SCBX has business continuity plan in place which include adaptation measures for core banking operations and systems to prevent physical measures as well as mechanical measures to prevent potential flooding of the key locations. In the same way, location operation of third party and service providers, although located differently, are in the same region. Therefore, they are unlikely to be affected by acute physical impact at the same time. SCB also plans to expand the scope of location specifically to cover physical branches to assess physical risks from climate and define a context specific assessment as well as a corresponding mitigation plan.

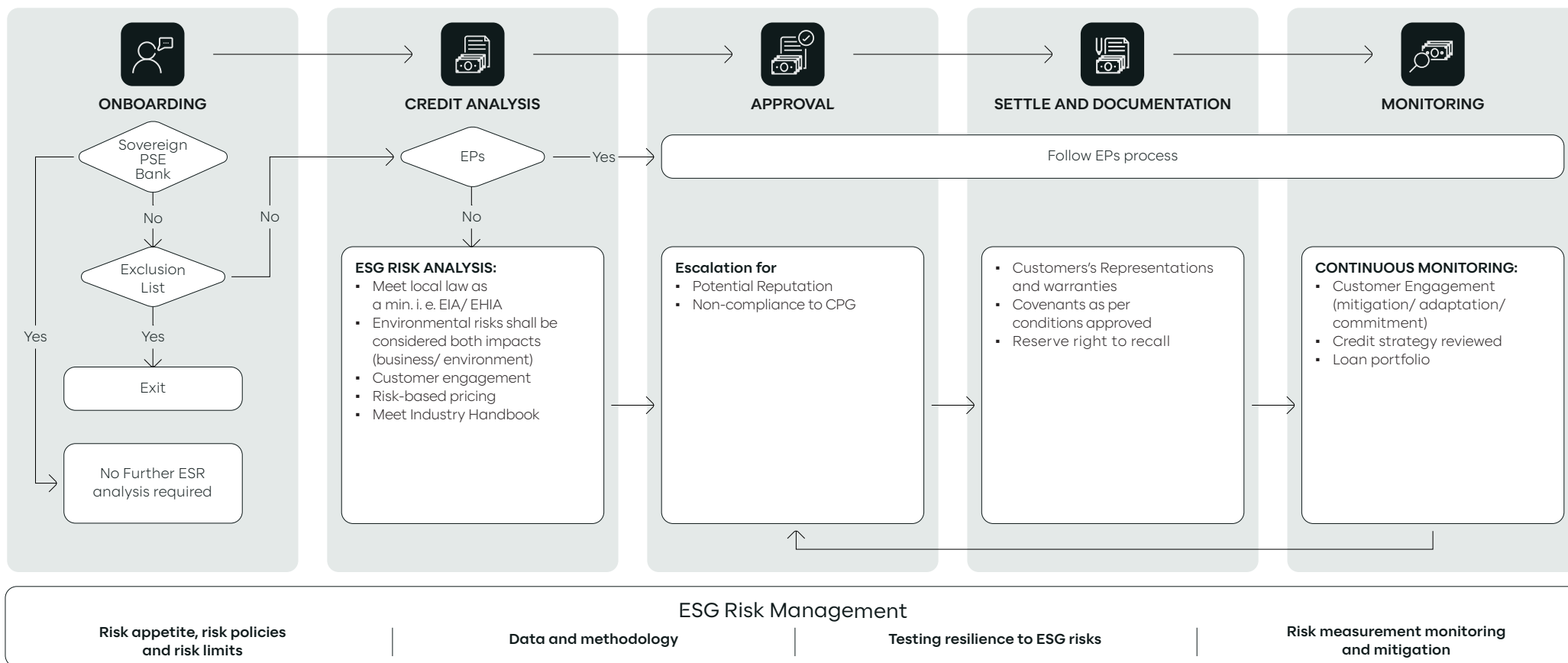


## Credit Risk Management

Majority of SCBX Group's revenue comes from the lending business, that is why systematic credit risk management and regular risk monitoring are crucial to the Group's operations. Failure to adequately examine climate risks in the credit underwriting process could result in financial, reputational, and legal risks since climate-induced changes may have direct and indirect consequences on our clients' business activities.

Therefore, SCBX Group, led by SCB, has incorporated climate change and ESG criteria into the credit underwriting process to thoroughly manage credit risks arise from climate change.

### SCB ESG and Climate Change Integration into Credit Underwriting Process for Corporate Finance

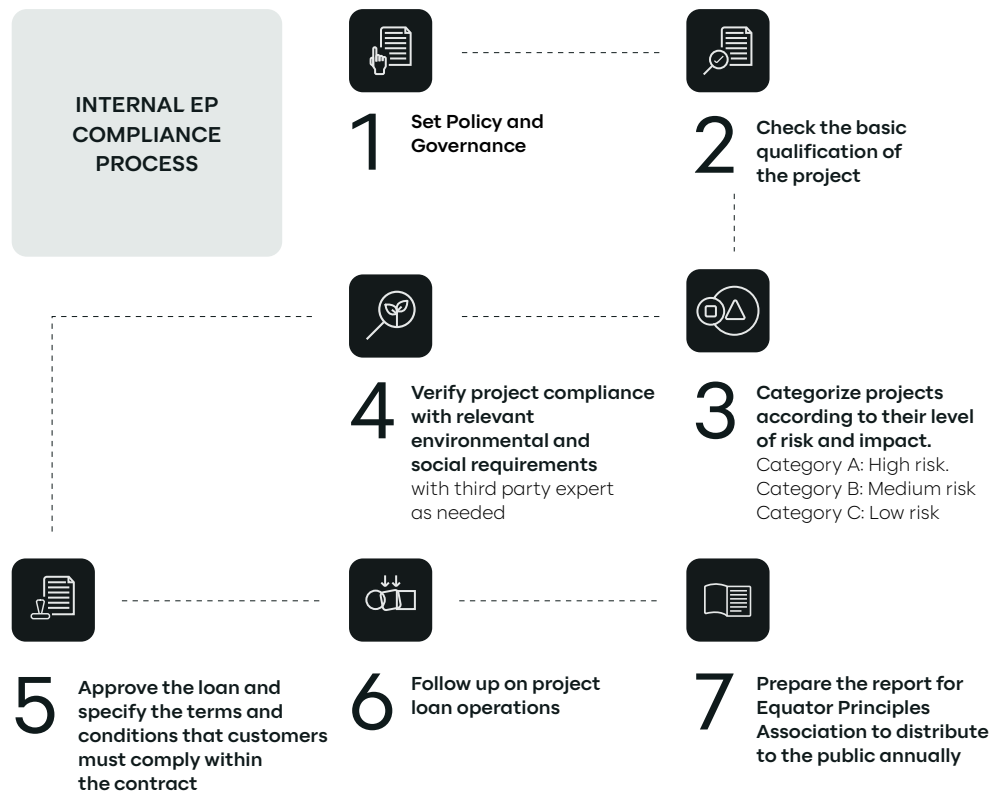


## Project Finance Risk Management in accordance with the Equator Principles



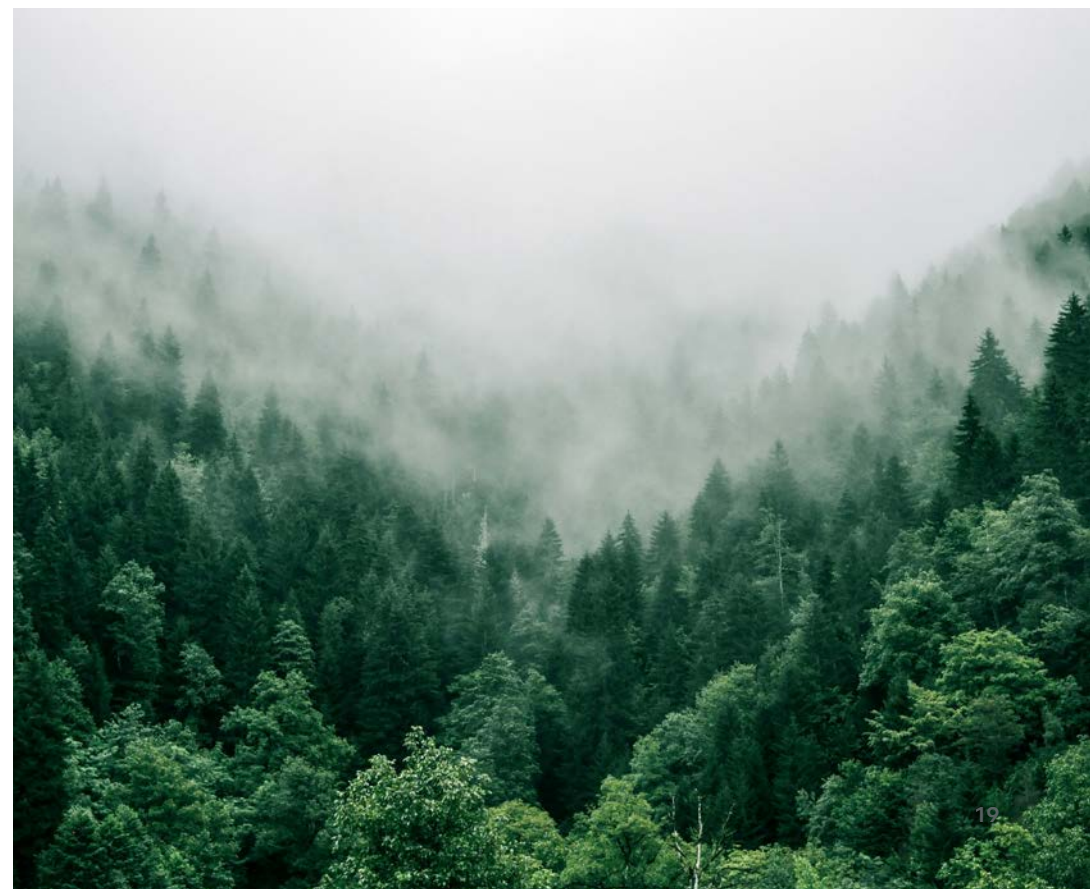
Without compelling risk monitoring, large-scale projects can cause significant impacts on the environment and society. As a signatory to the Equator Principles Association (EP) since January 2022, SCBX Group, by SCB, requires an extensive risk assessment in the underwriting process of Project Finance worth over USD 10 million. The assessment comprises identifying, managing, and evaluating environmental and social risks in compliance with the EP guidelines.

### EP-complied E&s risk management process



The Equator Principles also require the Bank’s clients to perform climate risk assessment—covering physical and transition risks as recommended by the TCFD. The assessment should factor in GHGs emissions, climate-related risks, opportunities from low-carbon transition, and potential transboundary impacts, as well as guidelines to mitigate GHGs emissions during the project design process and operation. Furthermore, the principles outline specific obligations regarding climate change, such as:

- Projects emitting more than 25,000 tons of carbon dioxide equivalent per year are required to measure both direct and indirect GHG emissions.
- High-risk (Category A) and medium-risk (Category B) projects are required to disclose the Environmental and Social Impact Assessment (ESIA) and the annual report on GHG emissions in an accessible online format.



In 2023, a total of 34 project finance underwent the assessment based on the Equator Principles. Among these, the highlighted project finance which integrated the consideration of ESG risks following the EP principles and the Bank's Responsible Lending policy included:

## Project 1

600 MW wind power plant in the Lao PDR:



### Project Summary

A 600-megawatt wind power plant is located in the southern part of the Lao People's Democratic Republic. It generates electricity for sale to the Electricity of Vietnam. The project area covers more than 708 square kilometers and is the largest wind energy project in Southeast Asia. This project supports Vietnam's demand for electricity from clean energy sources and is expected to reduce greenhouse gas emissions by approximately 700,000 tons of carbon dioxide equivalent per year. It also supports the economic and social development of Laos, including improving the lives and livelihoods of communities in the area.



### Environmental/Social Risks Assessment

Due to the large-scale nature of the project, the wind turbine sites and other related infrastructure construction and project operations in the area involve areas of significant biodiversity value, where endangered or near-extinct species have been found, as well as areas closely associated with local communities, indigenous peoples, and/or ethnic groups.



### Management Approach

The project underwent an environmental and social impact assessment, covering human rights activities, construction activities, and operations. Consultations and feedback from stakeholders were sought, and various management plans were developed, such as Environmental and Social Action Plans, Biodiversity Action Plans, Resettlement Action Plans, Indigenous Peoples Plans, and Stakeholder Engagement Plans. These plans aim to manage environmental and social impacts and reduce them to acceptable levels in line with international practices and standards. They also support economic and social development, community development, safety, health, community lifestyles, and biodiversity conservation. The project's social and environmental operations were overseen by a creditor consultant group specializing in social and environmental matters. They addressed various issues, including impact assessments and management plans. The Bank has monitored the progress of the work according to the plans and has tracked social and environmental progress specified in the loan agreement.

## Project 2

Condominium project within the metropolitan area of Bangkok



### Project Summary

The development project of a high-rise condominium within the metropolitan area of Bangkok comprises 158 residential units on a land plot sized 1-0-37 Rai. The project aims to provide residential accommodation along public transportation routes to reduce reliance on private cars within the urban area.



### Environmental/Social Risk Assessment

The development project of real estate within urban areas carries lower social and environmental risks compared to infrastructure or factory-type projects. However, construction planning can still have impacts on nearby areas, such as noise pollution, dust from construction, or appropriate accommodation for workers, and increased traffic congestion.



### Management Approach

The Bank mandated a systematic environmental and social risk analysis process. It specified environmental and social requirements that the project must adhere to, including compliance with environmental and social action plans. Additionally, the project is required to submit reports tracking environmental and social progress at specified intervals to the Bank.

## Project 3 hotel project in Phuket



### Project Summary

A hotel development project in Phuket province on a land plot sized 2-0-10.6 Rai, aimed at boosting local income from the tourism industry.



### Environmental/Social Risk Assessment

Hotel development projects carry social and environmental risks both during the construction phase and during operation.

**During the Construction Phase**, activities such as dust dispersion may affect health, while noise from machinery and equipment can disrupt daily life. Additionally, wastewater from construction activities may create unpleasant odors.

**During operation**, there may be resource exhaustion, and significant increases in traffic congestion.



### Management Approach

The Bank has rigorously monitored the project's progress, requiring documentation to illustrate compliance with social and environmental impact analysis as per the stipulated requirements. The project must adhere strictly to measures during both the construction and operation phases, with monitoring and reviews conducted according to the planned schedule. These conditions are specified in the loan agreement, and the Bank seeks to ensure that customers can genuinely fulfill these requirements. Evaluation then is carried out by in-house experts specializing in social and environmental risks.

## Risk Management in Fossil Fuel Financing

SCBX Group recognizes the importance of energy to the country's economic and social development. However, energy derived from fossil fuels is a major contributor to greenhouse gas emissions, exacerbating climate change issues. Therefore, SCBX Group, through Siam Commercial has established the **Statement on Fossil Fuel Financing** — which encompasses two high GHGs emissions industries, namely coal and unconventional oil and gas .

### Industry

### Excerpt from Policy

#### Coal

The Bank will not provide financial support to new or expansion of thermal coal project including

- Coal mining
- Coal-fired power plant
- Dedicated infrastructure for coal mining or coal-fired power plant

This includes companies seeking to expand their business presence through the development of new projects or actions related to the activities mentioned above.

#### Unconventional Oil and Gas Financing

The Bank will not provide financial support to new or expansion of unconventional oil and gas project including

- Arctic petroleum reserves
- Tar sands
- Ultradeep water
- Shale oil and gas field with formally approval for development after 2021

The policy also extends to the development of liquefied natural gas (LNG liquefaction) and other infrastructure particularly built to serve the aforementioned activities. For group company or companies engaging in multiple business sectors, the Bank will not provide financial support to those with more than 20% of revenue derived from unconventional oil and gas business, as mentioned above.

# 5 METRICS AND TARGETS



- 24 Net Zero Operations
- 27 Net Zero Financed Emission

SCBX Group recognizes the urgency of maintaining the global temperature rise within the Paris Agreement threshold of 1.5°C, and thus announced the ambition to achieve Operational Net Zero by 2030 and Net Zero Financed Emissions by 2050.

SCBX Group is the first financial technology group in Thailand to announce a science-based net zero target, aligning with the methodologies specified by the Science Based Targets initiative (SBTi). Our timeframe for achieving the goal also precedes Thailand's national target, which is set to be achieved by 2065. This is a challenging mission that SCBX is ready to put efforts into elevating internal management while navigating our clients and stakeholders through the climate crisis.





## Net Zero Operations

SCBX Group continues to manage environmental impacts resulted from our business activity, while actively seeking innovative approaches to alleviate adverse effects and contribute to positive changes.

In 2023, SCBX Group's operational GHG emissions (Scope 1 and 2) amounted to 63,147 tonnes of carbon dioxide equivalent or 10% reduction equivalent compared to 2022.

### Scope 1 and 2 GHG emissions reduction target (%)



### 2020-2023 GHG emissions performance (Unit: Tonnes of carbon dioxide equivalent)

Performance	SCB		SCBX Group		Target for 2023
	2020	2021	2022	2023	
<b>Scope 1</b>					
Gross direct (Scope 1) GHG emissions	10,027	8,039	7,514 <sup>1</sup>	11,518	12,000
<b>Scope 2</b>					
Gross location-based energy indirect (Scope 2) GHG emissions	48,678	42,430	62,643 <sup>1</sup>	61,628	-
Gross market-based energy indirect (Scope 2) GHG emissions	48,678	42,430	62,643 <sup>1</sup>	51,629	55,000
<b>Scope 3</b>					
Category 1: Purchased goods and services	-	-	34,636 <sup>2</sup>	30,061	
Category 5: Waste generated in operations	-	-	2,379	1,152	
Category 6: Business travel (by air only)	-	-	326	967	
Category 7: Employee commuting	-	-	-	442 <sup>2</sup>	

**Remark:**

- The previously reported data on scope 1 and 2 (2022) was revised due to a change of reporting scope to reflect emissions from SCB branch network where SCB has operational control over, SCB ATM, SCB Money Exchange booth, as well as additional buildings: Julius baer and Tawanron training center, AutoX branch network, CardX Call Center Building, and SCB 10X head office. The applied emission factor that of the Thailand Greenhouse Gas Organization (TGO)
- The reported data includes performance of SCBX only

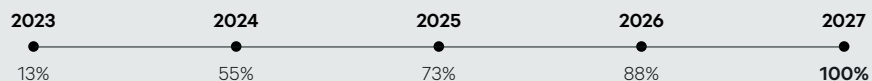
### Operational Net Zero Initiatives

To achieve the Operational Net Zero by 2030, SCBX Group has implemented a wide range of initiatives to reduce GHG emissions from our own's operations and outlined mid- and long-term roadmaps for future initiatives, including:

#### Scope 1

##### Shifting to R32 refrigerant air conditioners

SCBX Group plans to replace 3,017 units of R22 air conditioners at the head office and SCB branches nationwide with R32 air refrigerant which have low global warming potential (GWP) and no destructive impact on the ozone layer. The company upgraded 400 air conditioning units in 2023, or 13% of the targeted replacements.



##### Transitioning to Electric Vehicle (EV)

The combustion of gasoline and diesel fuel from internal combustion engine vehicles is among the sources of SCBX's own's GHG emissions. The company thus targets the 100% electric vehicle adoption by 2028. In 2023, SCB developed a long-term plan to replace 1,608 units of their vehicle fleets with EVs.



### Operational Net Zero Initiatives

#### Scope 2

##### Utilizing Solar Power

SCBX Group acknowledges the importance of accelerating the utilization of electricity derived from renewable sources while reducing reliance on and consumption of fossil fuels. In 2023, AutoX initiated the solar rooftop installation at 222 Ngern Chaiyo branches—122 of which were funded by AutoX, and another 100 were funded by Chow Energy. AutoX also plans to expand the project coverage to additional 200 branches in 2024. Furthermore, the company has replaced advertising sign lighting with solar-powered lights at 1,802 Chaiyo branches.



Solar rooftop installation funded by AutoX and Chow Energy is expected to save electricity costs by 80% and 20%, respectively.



Solar-powered lighting for advertising signs is expected to save electricity costs of around Baht 7.5 million and reduce GHG emissions by approximately 65 tonnes of carbon dioxide equivalent per year.

Apart from that, SCB has conducted a study on solar photovoltaic (Solar PV) installation at SCBX Group head office and planned to install a 999.9 kWp solar panel on approximately 5,350 square metres of area in 2024.



Solar PV installation is expected to reduce the volume of electricity purchase by 1.18 million kilowatt-hours and save electricity costs by Baht 6 million per year.



The initiative would help reduce GHG emissions of around 1,000 tonnes of carbon dioxide equivalent per year.

##### 100% Renewable Electricity Procurement

SCBX strives to achieve 100% renewable electricity procurement by 2030 and support mechanisms that promote renewable electricity generation and utilization in Thailand. To offset operational GHG emissions, SCBX has purchased 20,000 Renewable Energy Certificates (RECs)—totaling 9,999 tonnes of carbon dioxide equivalent in 2023.

## Operational Net Zero Initiatives

### Scope 3

#### Promote Green Supply Chain

In 2023, SCBX developed the SCBX Group Supplier Code of Conduct, requiring all suppliers' acknowledgement before commencing work. The code of conduct aims to nurture responsible business practices among suppliers and sustainable procurement practices within SCBX Group. Four key dimensions consist of:



**Business Ethics**



**Labor and Human Rights**



**Occupational Health and Safety**



**Environmental Management**

In addition, SCBX established the 'industry-specific requirements' for heavy-emitting sectors such as logistics, requiring them to formulate environmental policies and proposals that align with domestic and international regulations—including those related to climate change. By doing so, we seek to reinforce cooperation within the supply chain to collectively minimize GHG emissions while ensuring that our suppliers' operations are in line with SCBX's net zero commitment.

Furthermore, SCBX collaborated with the Creagy, a consultant specializing in climate change management to organize green procurement workshops for SCBX Group's procurement units in order to enhance knowledge and understanding of the green procurement guidelines. The main contents of the workshop included:

**Definition and importance of green procurement**

**Supplier evaluation procedure and criteria**

**Integration into the procurement process**

Furthermore, SCBX Group's draft green procurement guidelines are underway and expected to be implemented across all subsidiaries in 2024.



## Net Zero Financed Emissions

The net zero transition is a crucial milestone that needs synergy from all industries—including energy, transportation, real estate, agriculture, manufacturing, and more. Financial institutions are instrumental in empowering businesses and organizations to limit global temperature rise within 1.5°C and mitigate business risks associated with climate change.

SCBX Group recognizes the importance of GHG emissions management, particularly in Scope 3 Category 15 (financed emissions), which accounts for the largest share of GHG emissions in the financial sector. SCBX Group, led by SCB, has undertaken multiple measures to address the climate crisis. For instance, we continue to deliver green financial solutions to our clients, support responsible lending for project finance in compliance with the Equator Principles (EPs), introduce the Statement on Fossil Fuel Financing, covering 2 heavy emitter industries including coal and unconventional oil and gas, while engaging in climate-related initiatives at both national and international levels.

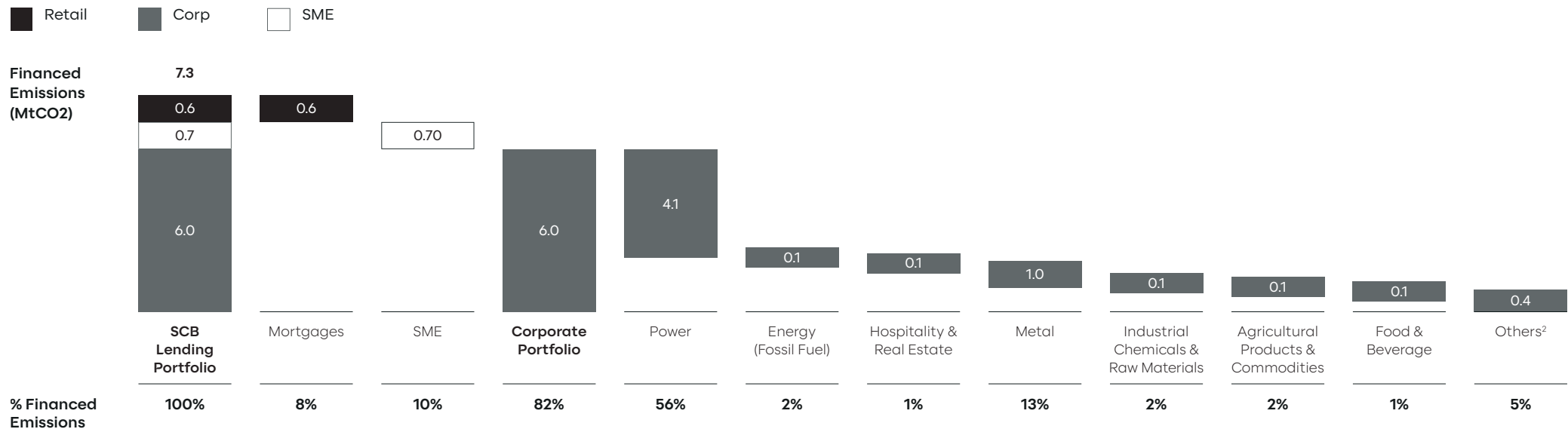


### Financed Emissions Measurement

For financial institutes, emissions from financed and investment activities are the largest sources of greenhouse gas emissions. However, challenge remains in collecting and compiling accurate data because of data availability, a number of entities in portfolio as well as greenhouse gas accounting approach of those entities. However, this does not mean the financial institutions should not report this important data, rather they should develop a process in place to systematically collect relevant data and apply appropriate emission factors to calculate financed and investment emissions.

For SCBX Group, in particular, SCB calculates financed and investment emissions in accordance with the Greenhouse Gas Protocol Scope 3 Category 15 by using the PCAF Global GHG Accounting and Reporting Standard for the financial industry. Notwithstanding, identifying near-term absolute emissions reduction target does not mean seeking to reduce the emission to zero, rather it is about aligning the financial flow towards the net zero aspiration. Accordingly, absolute emissions help SCB identify hotspots in the portfolio and prioritize sectors and asset classes for decarbonization journey. The result of calculating GHG emissions is provided in the section below.

2021 Financed Emissions (scope 3, category 15)<sup>1</sup> by Sector, MtCO<sub>2</sub>



**Remark:**

<sup>1</sup> The amount of calculated financed emissions include scope 1 and scope 2 emissions of customers.  
<sup>2</sup> Others include retail and wholesale trade, motor vehicles and parts, electronics and electronic components, construction, transportation and logistics, rice and rice products, telecommunications and media, financial institutions, and others.

### SCBX's Absolute Financed Emissions<sup>1</sup> per Asset Class and Business Segment

Asset Class	2021		2022		2023	
	Financed Emissions (Million t CO <sub>2</sub> e)	PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	Financed Emissions (Million t CO <sub>2</sub> e)	PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	Financed Emissions (Million t CO <sub>2</sub> e)	PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)
Business Loan - Corporate <sup>2</sup>	2.36	4.00	2.25	3.80	2.49	3.78
Project Finance <sup>2</sup>	3.59	3.16	3.10	3.07	3.02	3.12
Business Loan - SME <sup>2</sup>	0.70	4.11	0.61	4.16	0.58	4.13
Mortgage Loan	0.62	4.02	0.62	4.02	0.60	4.01
Investment in Listed Equity and Corporate Bond <sup>2</sup>	0.00	2.15	0.00	3.16	0.00	3.01
TOTAL	7.27	3.95	6.57	3.87	6.69	3.86

<sup>1</sup> Only scope 1 and scope 2 are included in financed emissions

<sup>2</sup> In-scope asset class of assurance

### SCBX's Financed Emissions<sup>1</sup> Intensity per Asset Class and Business Segment

Asset Class	2021		2022		2023	
	Financed Emissions Intensity <sup>3</sup> (tCO <sub>2</sub> e per million USD)	PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	Financed Emissions Intensity <sup>3</sup> (tCO <sub>2</sub> e per million USD)	PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	Financed Emissions Intensity <sup>3</sup> (tCO <sub>2</sub> e per million USD)	PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)
Business Loan - Corporate <sup>2</sup>	112	4.00	114	3.80	126	3.78
Project Finance <sup>2</sup>	966	3.16	965	3.07	961	3.12
Business Loan - SME <sup>2</sup>	98	4.11	97	4.16	94	4.13
Mortgage Loan	39	4.02	41	4.02	38	4.01
Investment in Listed Equity and Corporate Bond <sup>2</sup>	25	2.15	16	3.16	17	3.01
TOTAL	151	3.95	149	3.87	149	3.86

<sup>1</sup> Only scope 1 and scope 2 are included in financed emissions

<sup>2</sup> In-scope asset class of assurance

<sup>3</sup> Financed emissions intensity is in tons of CO<sub>2</sub> equivalent to USD 1 million of investment or loan (million USD), according to PCAF standard.  
Currency conversion referred to exchange rate as announced by The Bank of Thailand on average selling rates of the year

Detailed Breakdown of 2023 Emissions<sup>1</sup> Associated with Our Wholesale Banking Book

ISIC Sector	S1-S2 Financed Emissions (Million t CO <sub>2</sub> e)	S1-S2-S3 Financed Emissions Intensity (tCO <sub>2</sub> e per Million USD)	S1-S2 PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	S1-S2-S3 Financed Emissions (Million t CO <sub>2</sub> e)	S1-S2-S3 Financed Emissions Intensity (tCO <sub>2</sub> e per Million USD)	S1-S2-S3 PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	Relative Contribution
Power generation	3.38	864	2.9	4.12	1055	2.9	17%
CRE	0.18	36	3.5	0.54	108	3.8	22%
Fossil fuel	0.11	401	4.1	1.34	5032	4.1	1%
Industrial Chemicals & Raw Materials	0.33	136	3.7	1.73	722	3.7	10%
Wholesale & Retail	0.24	120	3.5	4.65	2350	4.1	9%
Real Estate	0.00	3	3.6	0.08	49	4.0	7%
Agricultural Products & Commodities	0.09	86	4.0	1.12	1034	4.0	5%
Transportation & Logistics	0.15	152	3.5	0.23	235	3.5	4%
Others	0.05	54	4.0	0.44	455	4.0	4%
Foods and Beverages	0.08	110	4.0	1.00	1452	4.0	3%
Telecommunications & Media	0.01	20	4.3	0.04	68	4.3	3%
Construction	0.02	35	4.1	0.29	451	4.1	3%
Metal	0.68	1096	4.1	2.91	4695	4.1	3%
Electronics & Electrical Appliances	0.03	60	4.1	0.84	1665	4.1	2%
Financial Institutions	0.00	4	4.2	0.03	68	4.3	2%
Auto & Parts	0.02	46	4.1	0.58	1456	4.1	2%
Building Materials	0.05	130	4.0	0.43	1206	4.0	2%
Hospitality	0.01	23	4.0	0.02	80	4.0	1%
Rice & Grain Milling	0.02	129	3.9	0.21	1260	4.0	1%
Power and Utilities	0.05	461	4.0	0.55	4875	4.0	0.5%
Energy	0.02	422	4.2	0.32	7108	4.2	0.2%

<sup>1</sup> Emissions include only business loan – corporate & project finance assets class

### Detailed Breakdown of 2023 Emissions<sup>1</sup> Associated with Countries

ISIC Sector	S1-S2 Financed Emissions (Million t CO <sub>2</sub> e)	S1-S2-S3 Financed Emissions Intensity (tCO <sub>2</sub> e per Million USD)	S1-S2 PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	S1-S2-S3 Financed Emissions (Million t CO <sub>2</sub> e)	S1-S2-S3 Financed Emissions Intensity (tCO <sub>2</sub> e per Million USD)	S1-S2-S3 PCAF Data Quality Score (Highest quality = 1 Lowest quality = 5)	Relative Contribution
Thailand	6.06	211.15	3.69	27.09	944.17	3.78	99%
China	0.00033	3.43	4.92	0.0040	42.19	4.92	0.33%
Vietnam	0.02325	104.01	4.62	0.3081	1,378.16	4.62	0.77%
Singapore	0.00285	53.65	5.00	0.0670	1,259.81	5.00	0.18%
Laos	0.00001	4.91	4.00	0.0001	58.63	4.00	0.01%
Others	0.00780	226.06	5.00	0.0333	966.27	5.00	0.12%

<sup>1</sup> Emissions include only business loan – corporate and SME & project finance assets class

### Implied Temperature Ratings Status and Pathway

Asset Class	2021		2022		2023		2028		2040	
	S1-S2	S1-S2-S3	S1-S2	S1-S2-S3	S1-S2	S1-S2-S3	S1-S2	S1-S2-S3	S1-S2	S1-S2-S3
Corporate Loan	2.8	3.1	2.8	3.0	2.7	3.0	2.35	2.71	1.5	2.0
Investment in Listed Equity and Corporate Bond	3.2	3.2	2.1	2.3	2.0	2.1	2.57	2.76	1.5	2.0



### Financed Emission Target Setting

SCBX recognizes that financial institutions play an important role in supporting the economy and achieving climate stability. Therefore, SCBX Group must transition their portfolios so that their financial flows become consistent with 1.5°C outcomes.

Currently, the SBTi Financial Institutions Net Zero Standard has not been finalized to communicate what is a long-term target for SCBX. Therefore, SCBX and SCB worked together with a support from external decarbonization expert to set near-term targets in accordance with SBTi Financial Institutions' Near-Term Criteria version 1.1, becoming the first financial institution in Thailand to commit to a SBTi-aligned near-term target. Transparency of target setting and compliance with SBTi requirement are important elements to prevent greenwashing. Therefore, SCBX seeks out SBTi validation of the near-term targets and expect to be approved within 2024.

SCBX follows SBTi criteria in target setting by using the Sectoral Decarbonization Approach (SDA) for power generation sector. For the fossil fuel, commercial real estate and the rest of the wholesale banking portfolio as well as investment in listed equity and corporate bond, the Implied Temperature Rise (ITR) approach is applied. This is a collaborative effort by CDP and WWF, for portfolio temperature rating.

### Power Generation Sector Decarbonization

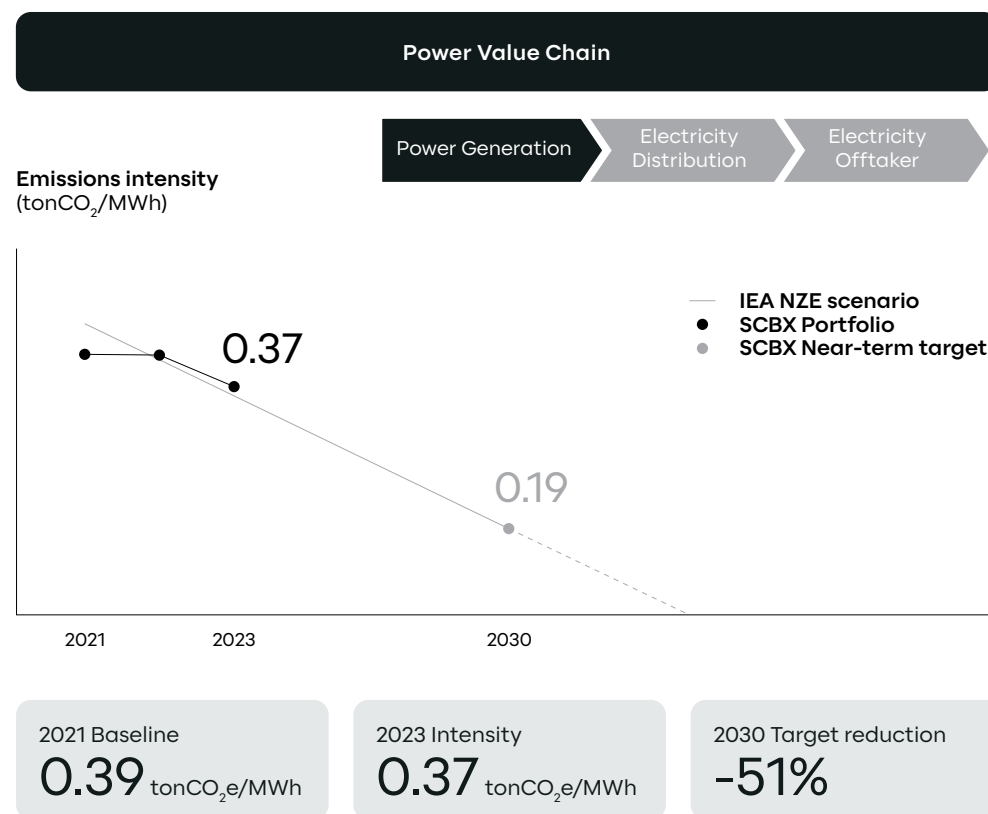
Power value chain produces a significant amount of greenhouse gases globally as well as in wholesale banking portfolio. Focusing on the power value chain helps SCBX and SCB to concentrate the effort on addressing the source of emission in respective sector. Here, the power generation is the critical area where decarbonization of this activity will help reduce emissions across the whole value chain. Financed emissions of this sector is calculated by using power production by type of fuel (e.g. solar, wind, natural gas, coal-fired) with specific emission factor of such fuel to generate the result. The coverage of power sector SDA includes 100% outstanding of both power generation project finance as well as corporate loan to companies classified as power company in wholesale banking segment.

Physical intensity metrics of ton CO<sub>2</sub>e per MWh electricity production is selected as measurement approach against International Energy Agency (IEA) Net Zero Emissions by 2050 Scenario (NZE Scenario). The baseline year 2021 is selected because the data is the most complete during target setting period. The emission intensity of 0.39 ton CO<sub>2</sub>e per MWh electricity production with average PCAF score of 0.37 is set as a starting point in which higher than NZE Scenario of the same year as 0.35 ton CO<sub>2</sub>e per MWh.

The emission intensity in 2023 increased because of the changing of power plant portfolio mix. SCBX and SCB are closely monitoring the change in emission intensity of this portfolio and

would seek to add new clean energy financing and reduce exposure from coal-fired powerplant to steer the course back to the pathway.

In power generation portfolio of SCB, the result of SDA approach indicates that repayment of current outstanding could drive emissions lower through itself because SCB financed many renewable energy project in the past. However, in order to also drive the revenue while balancing decarbonization pathway, it has been studied and informed that there is opportunity for SCB to bring in about 4.3GW of renewable energy by 2030 that could worth up to 48 billion Baht of new loan to such project with approximately 67 million Baht of the current annual cost associated.



### Portfolio Alignment with Paris Agreement

One of the key issues facing financial institutions across the world especially for those operating developing countries is the lack of quality data to set a meaningful and utmost accurate target without having to provide a restatement every year. Therefore, Implied Temperature Rise (ITR) is a method selected to address such problem while also allowing financial institutions to track how the portfolio is aligned with 1.5°C target. The coverage of ITR target in SCB's portfolio is as follow:

Asset Classes	Threshold
<b>Corporate Loan Target</b>	
Corporate loan to fossil fuel companies	100%
Corporate loan to commercial real estate companies	100%
The rest of the corporate loan portfolio	70%
<b>Listed Equity and Corporate Bond Target</b>	
Investment in listed equity	100%
Investment in corporate bond	100%

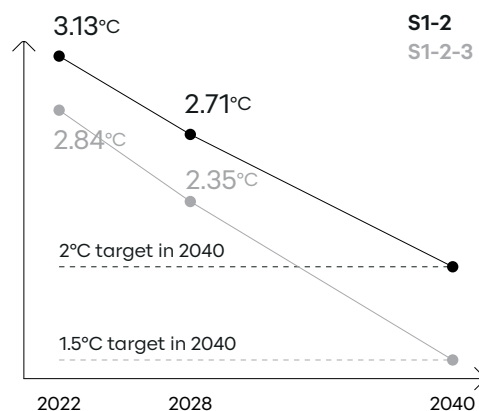
#### The CDP-WWF Temperature Rating methodology

The CDP-WWF Temperature Rating methodology is the Implied Temperature Rise (ITR) approach approved by SBTi. It is an open-source framework developed by CDP (formerly the Carbon Disclosure Project) and WWF (World Wide Fund for Nature) to assess the ambition of corporate greenhouse gas emission reduction targets.

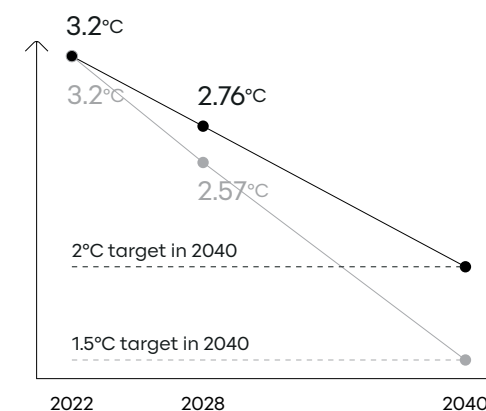
- Target Protocol: Converts individual emissions targets into temperature estimates using scientific climate scenarios from the IPCC Special Report on 1.5°C. It generates regression models for estimated warming based on short, medium, and long-term trends in emissions.
- Company Protocol: Aggregates individual targets into an overall company score.
- Portfolio Protocol: Weights company scores across an investment portfolio. Companies without relevant, publicly disclosed targets receive a default temperature score assuming a business-as-usual pathway.

The methodology allows financial institutions to assess the temperature alignment of investment portfolios and set climate targets. It's a key tool for aligning portfolios with long-term goals, such as limiting global temperature rise to 1.5°C

**Implied Temperature Rise (ITR) - Corporate Loan**



**Implied Temperature Rise (ITR) - Listed Equity & Corporate Bond**



The progress of ITR is under development and will be available in the next report.

### Levers to Achieve Net Zero

SCBX has outlined a specific pathway for the banking business to ensure net zero in financed emissions—which contributes 99% of SCBX's total greenhouse gas emissions (scope 1, scope 2, and scope 3 category 15).

	<b>ENGAGEMENT</b>	Build engagement with clients to illustrate the importance of climate risk management and opportunities, leading to their net zero target-setting
	<b>TRANSITION/GREEN PRODUCT</b>	Offer financial products, such as sustainability linked loan, transition finance, which support client's emission reductions
	<b>REALLOCATION</b>	Reallocate credit portfolio towards businesses that aspire to achieve net zero target
	<b>INVESTMENT</b>	Expand investments in assets/ new clients that demonstrate business activities toward net zero
	<b>DIVESTMENT</b>	Reduce the proportion of business or activities that lack commitment to transition towards a low-carbon economy

In 2023, SCBX Group by SCB continued to support businesses and projects aiming to tackle impacts or adapt to climate changes through financial support, financial advisory services, and sustainability investing worth over Baht 161,090 million in total.

	Value (Million Baht) In 2023	Sustainability value against total portfolio
		2023
<b>Sustainable Financing</b>		
Corporate	75,794	31.8%
SME	2,153	2.58 %
Retail	2,178	1.62%
<b>Sustainable Advisory</b>		
Green Bond	4,584	3.7%
<b>Sustainable Investing</b>		
Wealth	76,381	11.09%

Sustainable Finance and Advisory Services

Corporate Client

Sustainable financial solutions of over

**80,378** million Baht for 53 corporate clients

Sustainability loans accounted for

**31.8%** of total approved loans (new booking) for corporate clients in 2023

Percentage of sustainability loans

- Alternative Energy 53%
- Sustainability Linked Loan 36%
- Electric Vehicle 10%
- Environmental Activity 1%

Green Loans



SCB provides green loans for corporate clients in more than 11 major industries such as energy, tourism, and manufacturing with aims to drive the net zero transition and foster environmentally sustainable economic activities. In doing so, the Bank endorses the Green Loan Principles compiled by the Loan Market Association (LMA), Loan Syndications and Trading Association (LSTA), and Asia Pacific Loan Market Association (APLMA).

**44,764 million Baht of new booking**  
**8,847 million Baht of loans outstanding**

Sustainability-Linked Loan



SCB offers sustainability-linked loans with special interest rates under required conditions and agreements related to the Sustainability Performance Targets (SPTs). Some of the Key Performance Indicators (KPI) predetermined by clients include external ratings, energy efficiency improvements, GHGs emissions mitigation, and water saving. To encourage corporate clients to pursue the SDGs, the Bank also adopted the Sustainability-Linked Loan Principles (SLLP) by the Loan Market Association (LMA), Loan Syndications and Trading Association (LSTA), and Asia Pacific Loan Market Association (APLMA).

**31,030 million Baht of new booking**  
**10,500 million Baht of loans outstanding**

Sustainable Bond Underwriting



SCB is among the underwriters of green bonds of which the use of proceeds is for environmental benefits—including the development of renewable energy, clean mobility, and climate adaptation. Besides the use of proceeds, the Bank also ensures compliance with the Green Bond Principles by the International Capital Market Association (ICMA) and ASEAN Green Bond Standards (ASEAN GBS).

In 2023, all green bonds issued by SCB underwent a comprehensive verification and second-party opinion from independent experts. There were a total of three companies involved in this process:

Company	Verified/ Approved by
Gulf Energy Development	DNV Business Assurance Australia Ltd.
Energy Absolute PCL	DNV GL (Thailand) Co., Ltd.
Xayaburi Power Co., Ltd	DNV Business Assurance Australia Ltd.

**4,584 million Baht worth of sustainable bond value**  
**Or 3.7 of the total bond issuance value**

In 2023, SCB reaffirmed its commitment to sustainable finance and incentivised customers to conduct businesses sustainably by supporting the 'Sustainability Linked Swap,' a financial risk mitigation agreement linked to sustainability performance. This involved incorporating Environmental, Social, and Governance (ESG) performance criteria into the consideration for adjusting interest rates in transactions for customers. Additionally, customers in two industries, namely energy and petrochemicals, were supported.

## SME Clients

Financial solutions for environmentally friendly business of over

**2,153** million Baht  
for 163 SME clients,

accounting for

**2.58%** of all  
approved loans (new booking)  
for SME clients in 2023

### SCB SME Green Finance



SCB supports SME clients seeking to operate sustainable businesses. In doing so, the Bank facilitated their access to funding by offering special interest rates and conditions. Through this initiative, the Bank assisted SME clients in bridging the sustainability capability gap and adapting to a low-carbon transition. The Bank offers two main products for green financial solutions as follows:

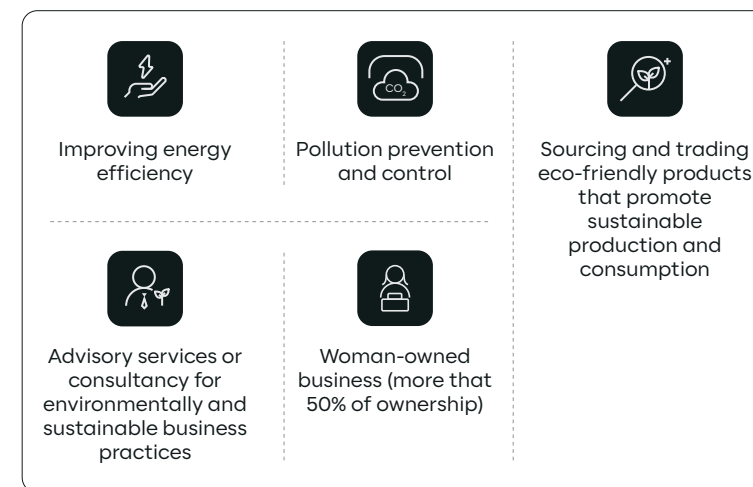
Green Loan		Transformation Loan
<p><b>Objective</b> To support following activities:</p> <ul style="list-style-type: none"> <li>Energy efficiency improvement</li> <li>Clean mobility/ transportation</li> <li>Pollution control</li> </ul>	<p>To invest in energy efficiency improvement</p>	<p><b>Objective</b> To invest in following activities:</p> <ul style="list-style-type: none"> <li>Energy-efficient systems, clean or renewable energy</li> <li>Environmentally friendly or zero-waste manufacturing and service</li> <li>Electric vehicles or clean energy</li> </ul>
<p><b>Maximum capital</b> 30-50 million for working capital with no collateral Up to 100% of investment value</p>	<p>100 million Baht (No collateral required for 50 million baht)</p>	<p><b>Maximum capital</b> 150 million Baht based on the Bank of Thailand's guidelines</p>
<p><b>Duration</b> 10 years maximum</p>	<p>10 years maximum</p>	<p><b>Duration</b> 10 years maximum</p>

**1,771 million Baht of new booking**  
**1,317 million Baht of loans outstanding**

### Green Loan for sSME



SCB introduced the 'SCB Green Loan: Green Forward' campaign, featuring special interest rates for sSME engaging in 5 activities:



**382 million Baht of new booking**  
**339 million Baht of loans outstanding**

## Retail Customers

Sustainability loans over  
**2,178** million Baht  
for 2,535 retail customers

accounting for  
**1.62%** of all approved  
loans for retail customers in 2023

### Clean Mobility Loan



SCB offers clean mobility loans while collaborating with partners to develop inclusive financial solutions to foster the electric mobility ecosystem.

**1,926 million Baht of new booking**  
**2,315 million Baht of loans outstanding**

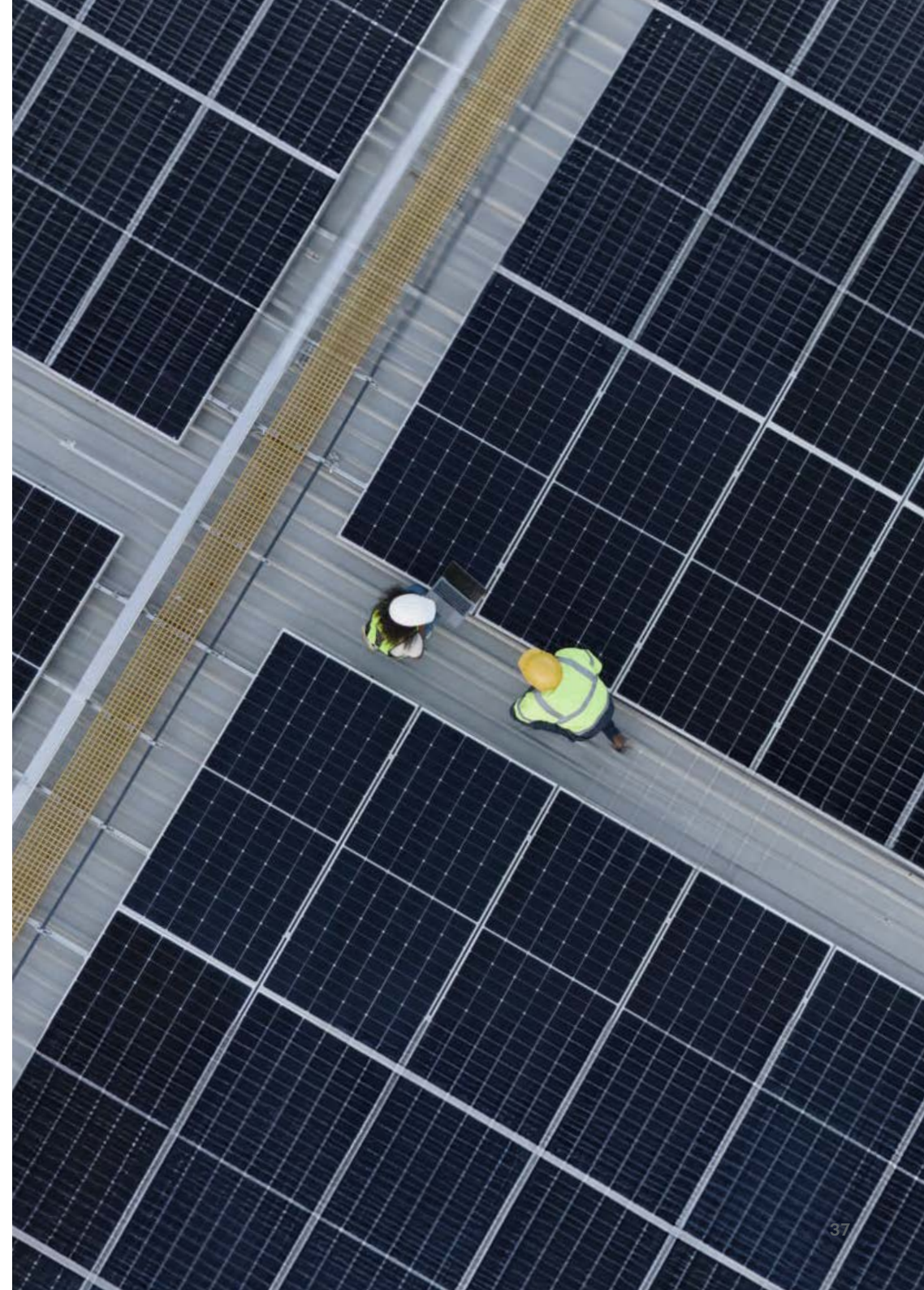
### SCB Home Loan: Green Energy



SCB provides loans for green and energy-efficient homes. Solutions cover the purchase, construction, repair, and maintenance of residences to install solar rooftops or other energy-saving equipment and technologies.

In 2023, the Bank partnered with SCG—the leading construction material company—to launch the '**SCB x SCG SOLAR Roof Solutions**' campaign. The initiative featured special interest rates and promotions for retail customers and SMEs looking to install solar rooftops or other smart home technologies and innovations by SCG. Through this collaborative effort, the Bank aspires to pioneer clean energy consumption and a wider transition to eco-friendly homes.

**252 million Baht of new booking**  
**243 million Baht of loans outstanding**



### Sustainable Investing

SCBX Group, through SCB, is committed to embedding ESG considerations into our investment advisory and wealth management services. At SCB WEALTH, sustainable investing is consistently championed in correspondence with the **Responsible Investment Advisory Policy**. Likewise, our subsidiary, SCB Asset Management (SCBAM), adheres to the **Responsible Investment Policy** as part of the commitment to responsible and sustainable investment practices.

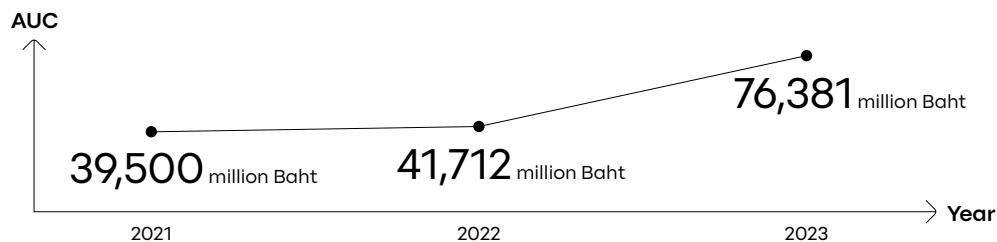
SCB has inaugurated the Investment Data Analytics and Advisory Center, tasked with conducting in-depth research on ESG issues. The center operates under the financial and investment management policy, in adherence to preliminary product assessment criteria. The research findings are then presented to the Investment Committee—chaired by the CEO and Risk Management Committee—to ensure alignment with current business practices.

### SCB Wealth Management

SCB WEALTH strives to integrate ESG considerations into investment advisory and the selection of fund and asset management companies recommended to clients. In an evaluation process, foreign or domestic funds are assessed using global sustainability benchmarks, whereas the selection of Thai asset management companies incorporates the Investment Governance Code (I Code) set by the Securities and Exchange Commission (SEC). This approach enables SCB to oversee risks and cultivate long-term value additions that align with clients’ investment goals and risk appetite.

In 2023, SCB WEALTH delivered 184 sustainable funds as green investment alternatives, increased from 138 funds in 2022, totaling Baht 76,381 million or 11.09% of total assets under custody (AUC).

#### Total value of sustainable investment advisory



### SCB Asset Management (SCBAM)

SCB Asset Management, or SCBAM, has endorsed the Principles of Responsible Investment since 2014 to enhance sustainability investing solutions. As a landmark achievement in 2022, SCBAM was the first asset management firm to win the “Best Asset Management Award for Sustainability” at the SET AWARD 2022 and emerged as a leader of Thai ESG investment in 2023—securing the top market share in the sector.

\* Data from Morningstar as of December 31, 2023



## NOTES ON METHODOLOGY

### Net Zero Operation

- SCBX uses the operational control method to define organizational boundary. This includes the buildings and activities of SCBX and its portfolio companies. The reporting also excludes building operation in which we do not have operational control.
- Scope 2 emissions using market-based method and the base year for scope 1 and scope 2 target is 2023 to reflect the most accurate business activities after COVID-19 outbreak period.
- For direct emissions, we use emissions factors from in reference to the most recent Thailand Greenhouse Gas Management Organization (TGO).
- For electricity generation, SCBX uses emission factors of 0.4999 tons CO<sub>2</sub>e per megawatt-hour (MWh) from TGO.
- For air travel, SCBX uses emission factor, in reference to International Civil Aviation Organization (ICAO).
- Data on fuel consumption from the Group's vehicles covers fuel consumption for vehicles used, managed and are under the Group's main operations. Data was collected from fleet cards and invoices submitted by suppliers.

### Net Zero Financed Emissions

- Asset management is one of the business under Siam Commercial Bank, a subsidiary under SCBX and it is not a part of financed emissions and target setting.
- SBTi target setting does not include loan in Small and Medium Enterprise (SME) segment's portfolio in which the definition of SCBX, through management of SCB, SMEs are companies with annual revenue ranging from 70 to 500 million Baht.
- Revenue based emission factors used in calculation of financed emissions are from financed emissions model of an external professional advisor which use data set (emissions, revenue, etc.) from a global leading data provider used for revenue calculation in specific sector, e.g. power generation in Thailand. The company-level revenue intensity is calculated by dividing company emissions by revenue. The sector-region average is calculated as a trimmed mean of company intensities between the certain percentiles. This ensures that the sector-region intensity is not disproportionately affected by outliers with very small or large entity intensities and that the model retrieves and uses the sector data most specifically to country where it operates.
- Transaction between financial institutions (e.g. interbank loan) is not included in the financed emissions and SBTi target setting because majority of it does not create real world activities which should not significantly affect greenhouse gas emissions. However, lending to FI with known use of proceed to support specific project will be included in financed emissions calculation and SBTi target setting.
- Mortgage loan will include only loan that has collateral value for residential purpose only. Mortgage loan with zero exposure, missing original property value or original value is zero are not included in a calculation.



## Climate Risk Assessment

- Key assumptions and technical detail of physical climate risk assessment on Expected Loss (EL) and Unexpected Loss (UL) related to the core bank operation in this exercise are as follows

Risk Category	Impact on clients/ SCBx (Effects)	Potential Risk Events for SCBx	Risk Item/ Exposure (Description)	Risk Item/ Exposure (Units)	Percentage Impact on EL and UL	Expected Loss EL (Average Annual Loss) over Time Horizon	UL (Average Annual Loss) over Time Horizon	Existing Mitigation/ Controls
					Residue Risk	Residue Risk	Residue Risk	
Operational risk	Unable to deliver client transaction/ services	Damage to the bank's or 3rd party (including outsourcing) vendors' critical operational facilities e.g. Bank's data center, Bank's Internet provider etc  Loss/damage of critical physical/ data storage sites	Earnings 'at risk' from disruption to critical data centers (Core banking system) needed to service Bank's clients from Rainfall flood	39,477 million Baht  (Non-interest income)	RCP 2.6 <1%  RCP 4.5 <1%  Based on our historical experience of big flood in 2011, SCB can operate normally during flood period with our existing mitigation and control hence the downtime is considered as at least 1 day for expected impact for conservative purpose	RCP 2.6 108 million Baht (maximum outage 1 day)  RCP 4.5 108 million Baht (maximum outage 1 day)	RCP 2.6 216 million Baht (maximum outage 2 day)  RCP 4.5 216 million Baht (maximum outage 2 day)	<ul style="list-style-type: none"> <li>SCB has backup site at Chonburi to support core banking operation</li> <li>SCB has IT Business Continuity Plan (BCP) and Business Continuity Management (BCM) to handle such case</li> </ul>

- Key assumptions and technical detail of transition risk assessment from changes in regulation on Expected Loss (EL) and Unexpected Loss (UL) related to the core bank operation in this exercise are as follows

Risk Category	Impact on clients/ SCBx (Effects)	Potential Risk Events for SCBx	Risk Item/ Exposure (Description)	Risk Item/ Exposure (Units)	Percentage Impact on EL and UL	Expected Loss EL (Average Annual Loss) over Time Horizon	UL (Average Annual Loss) over Time Horizon	Existing Mitigation/ Controls
					Residue risk	Residue Risk	Residue Risk	
Credit risk	Higher potential probability of default (increase potential loss given default)	Potential profits and loss/capital losses from default of high emission clients in loan portfolio due to climate transition impact on banking book portfolio names	Loan (banking) book portfolio outstanding notional by high emission sectors  Historical loan loss provisions to benchmark against climate event scenario	855,143 million Baht	DISORDERLY - DELAYED TRANSITION EL: 0.76% UL: 2.18%  HOT HOUSE WORLD - NDC EL: 0.76% UL: 1.41%	DISORDERLY - DELAYED TRANSITION 6,523 million Baht  HOT HOUSE WORLD - NDC 6,523 million Baht	DISORDERLY - DELAYED TRANSITION 18,609 million Baht  HOT HOUSE WORLD - NDC 12,031 million Baht	<ul style="list-style-type: none"> <li>Monitoring of measurable transition plan to achieve an orderly path to net zero in line with regulatory expectations for high emission clients</li> <li>Responsible Lending Exclusion List</li> <li>Client engagement</li> </ul>



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**Independent Assurance Report**  
 To the Directors of SCB X Public Company Limited

**Scope**

We have been engaged by SCB X Public Company Limited (“SCBX”) to perform a ‘limited assurance engagement,’ as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on SCB X Public Company Limited’s identified subject matters (the “Subject Matters”) for the year ended 31 December 2021, 2022, and 2023 contained in SCBX’s 2023 Climate Report’ (the “Report”).

Our limited assurance engagement covers the following Subject Matters:

Subject Matters	Scope	Report’s Table name	Report’s page
Financed Emission of <ul style="list-style-type: none"> <li>• Business Loans,</li> <li>• Project Finance, and</li> <li>• Investment in Listed Equity and Corporate Bond</li> </ul>	SCBX and its subsidiaries	SCBX’s Absolute Financed Emissions per Asset Class and Business Segment	29
Financed Emission Intensity per the financing or investment amount of - <ul style="list-style-type: none"> <li>• Business Loans,</li> <li>• Project Finance, and</li> <li>• Investment in Listed Equity and Corporate Bond</li> </ul>		SCBX’s Financed Emissions Intensity per Asset Class and Business Segment	

Other than as described in the above table, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

**Criteria applied by SCBX**

In preparing the Subject Matters, SCBX applied the measurement methodology in accordance with Global GHG Accounting and Reporting Standard for the Financial Industry developed by Partnership for Carbon Accounting Financials (PCAF) (the “Criteria”).



**SCBX’s responsibilities**

SCBX’s management is responsible for selecting the Criteria, and for presenting the Subject Matters in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matters, such that it is free from material misstatement, whether due to fraud or error.

**EY’s responsibilities**

Our responsibility is to express a conclusion on the presentation of the Subject Matters based on the evidence we have obtained.

We conducted our engagement in accordance with the *International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* (‘ISAE 3000 (Revised)’) and *International Standard for Assurance Engagements on Greenhouse Gas Statements* (‘ISAE3410’), and the terms of reference for this engagement as agreed with SCBX on 15 July 2024. These standards requires that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matters in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

**Our independence and quality management**

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements*, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.



#### *Description of procedures performed*

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matters and related information, and applying analytical and other appropriate procedures.

Our procedures included:

- ▶ Conducted interviews with key personnel to understand the business and reporting process
- ▶ Conducted interviews with key personnel to understand the process for collecting, collating and reporting the subject matters during the reporting period
- ▶ Checked that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the Criteria
- ▶ Undertook analytical procedures of the data and made inquiries of management to obtain explanations for any significant differences we identified
- ▶ Identified and testing assumptions supporting calculations
- ▶ Tested, on a sample basis, underlying source information to check the accuracy of the data

We also performed such other procedures as we considered necessary in the circumstances.



#### *Other matters*

Our report does not extend to any disclosures or assertions relating to future performance plans and/or strategies disclosed in the Report.

The maintenance and integrity of SCBX's website is the responsibility of SCBX's management. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for any changes to the Subject Matters and related disclosures, the Report or to our independent limited assurance report that may have occurred since the initial date of presentation on SCBX's website.

#### *Conclusion*

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Subject Matters for the year ended 31 December 2021, 2022, and 2023, in order for it to be in accordance with the Criteria.

#### *Restricted use*

This report is intended solely for the information and use accordance with our engagement terms agreed with SCBX, and intended solely for the Directors of SCBX for the purpose of reporting the Subject Matters in the Report and is not intended to be and should not be used by anyone other than those specified parties. To the fullest extent permitted by law, we do not accept or assume any responsibility for any reliance on this assurance report to any persons other than the Directors of SCBX, or for any purpose other than that for which it was prepared.

Wilaiporn Ittiwiroon  
Partner  
EY Office Limited

Bangkok, Thailand  
24 December 2024



## SCB X Public Company Limited

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